

New Products

Moncada (Valencia-SPAIN), March 2010

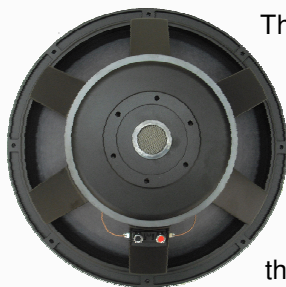
Beyma's constant works and studies on every aspect related to acoustical transducers are conveniently applied to the final product in order to satisfy the latest and more exigent audio systems requirements.

In this way, our new PM4 diaphragm is the result of our research in new materials, done with the aim of providing our products properties for being beyond any available loudspeaker in the market. The new **CD10Nd** and **CD10Fe** are the first compression drivers in the audio field using this innovative material, which confers superb sonic response with unparalleled natural sound as well as the strength, stability and resistance that is required in the professional applications.



With same concept philosophy of our successful 6CX200Nd, we introduce the new **5CX200Nd**, a compact 5" coaxial speaker, which is able to work in a real full range application thanks to the low frequency extension of the woofer, an accurate and clear mid frequency response which takes benefit from the demodulating ring and optimized high frequencies with controlled dispersion provided by the 1,75" compression driver with a custom made aluminium horn. The common neodymium circuit design results in a compact and powerful unit: 300/80 watt program capacity (LF/HF) with 1,85 kg weight and less than 100 mm depth.

The **8CX300Nd** joins the family as well. Far beyond any existing 8" coaxial driver in the market: Carbon Fiber loaded cone with Santoprene™ surround and extended displacement capabilities which means an outstanding low response and accurate mids; PM4 diaphragm for the 1,75" compression driver which provides natural sound and extended high frequency response; demodulating ring for lower harmonic distortion; designed with MMSS Technology for a symmetric and linear behaviour; compact and low weight thanks to the common neodymium motor design ... a top of the range.



The LX60 subwoofer family, well known by many users worldwide for many years, is updated now providing the new units our latest improvements in technology, materials and processes, which results in the **LX60V2 family: 12LX60V2, 15LX60V2 and 18LX60V2**. The new units deliver the same response and have equivalent parameters as the previous ones (1400 W power capacity) in order to be a perfect replacement while featuring the new improvements, like the waterproof treatment for both sides of the cone; the FEA optimized magnetic circuit which, along

with the MMSS suspension system design, provides a controlled, linear and symmetric behaviour of the moving assembly, resulting in lower harmonic distortion; new 4" DUO double layer inner/outer voice coil or the new CONEX spiders for higher resistance and consistency. They simply are improved bestseller subwoofers.



...and also available in our range: the SW1600Nd subwoofer family with **HELICEX® Technology**, including the most powerful 12" sub in the market, the 2400 watts **12SW1300Nd** as well as the dynamic and precise **15SW1300Nd**. The family is completed with the 18SW1600Nd and 21SW1600Nd; two big pieces able to handle 3200 watts.

For further information, please do not hesitate to contact us or just visit our website.

KEY FEATURES

- High power handling: 150/40 w AES (LF/HF)
- High sensitivity: 92,5/102 dB (LF/HF)
- Low resonant frequency: 89 Hz
- Extended controlled displacement: $X_{max} \pm 5\text{mm}$
- Extended mechanical displacement capability: $X_{damage} \pm 16\text{mm}$
- Designed with MMSS technology for high control, symmetry and linearity
- Demodulating ring for low harmonic distortion
- CONEX spider for higher resistance and consistency
- Waterproof Paper Cone with Santoprene™ surround
- Common Neodymium magnetic system for low weight and mounting depth
- Excellent off-axis response
- 70° conical dispersion

TECHNICAL SPECIFICATIONS

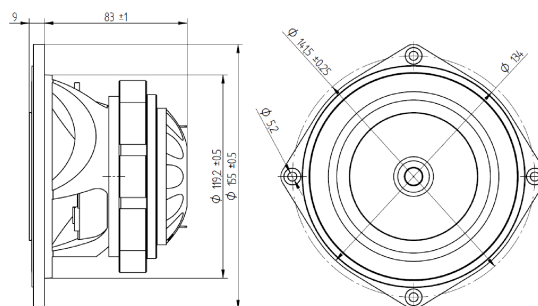
Nominal diameter	125 mm. 5 in.
Rated impedance	8 ohms
Minimum impedance	6.2ohms
Power capacity*(LF/HF)	150 / 40 w AES
Program power(LF/HF)	300 / 80 w
Sensitivity (LF/HF)	92.5 dB / 102 dB 1W @ 1m @ 2π
Frequency range	60 - 20000 Hz
Recom. enclosure vol.	10 / 20 l 0.35 / 0.7 ft. ³
Voice coil diameter	38.5 mm. 1.5 in.
Magnetic assembly weight	1.2kg. 2.64 lb.
BL factor	8.5 N / A
Moving mass	0.008 kg.
Voice coil length	12 mm
Air gap height	6 mm
X damage (peak to peak)	16 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, fs	89 Hz
D.C. Voice coil resistance, Re	5 ohms
Mechanical Quality Factor, Qms	7.95
Electrical Quality Factor, Qes	0.33
Total Quality Factor, Qts	0.31
Equivalent Air Volume to Cms, Vas	5.11 l
Mechanical Compliance, Cms	405 μm / N
Mechanical Resistance, Rms	0.54 kg / s
Efficiency, ηo (%)	1.06
Effective Surface Area, Sd (m ²)	0.0095 m ²
Maximum Displacement, Xmax***	5 mm
Displacement Volume, Vd	48.1 cm ³
Voice Coil Inductance, Le @ 1 kHz	0.09 mH



DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	155 mm.	6.10 in.
Bolt circle diameter	141.5 mm.	5.57 in.
Baffle cutout diameter:		
- Front mount	120 mm.	4.72 in.
- Rear mount	120 mm.	4.72 in.
Overall Depth	94mm.	3.7 in.
Mounting Depth	84mm.	3.3 in.
Volume displaced by driver	0.5 l.	0.02 ft. ³
Net weight	1.85kg.	4.07 lb.
Shipping weight	2.5 kg.	5.5 lb.

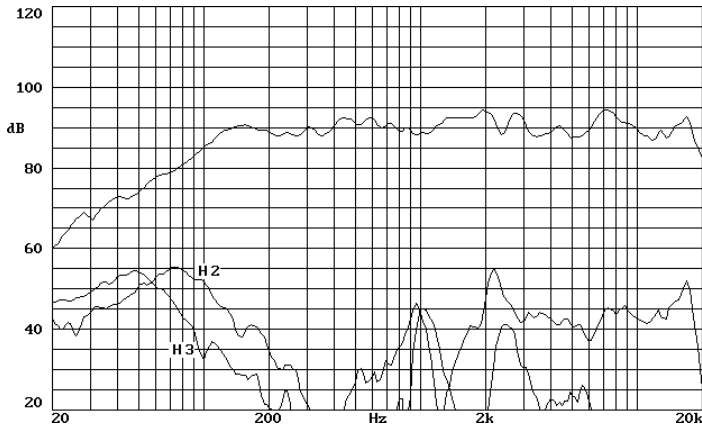
Notes:

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

**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).

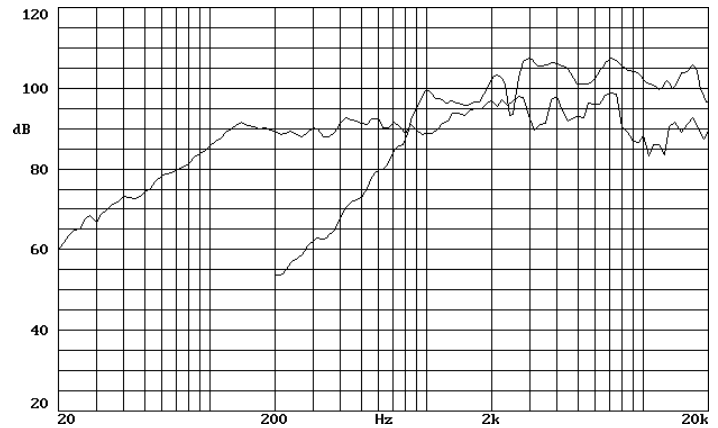
***The Xmax is calculated as $(L_{vc} - H_{ag})/2 + H_{ag}/3.5$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

FREQUENCY RESPONSE AND DISTORTION

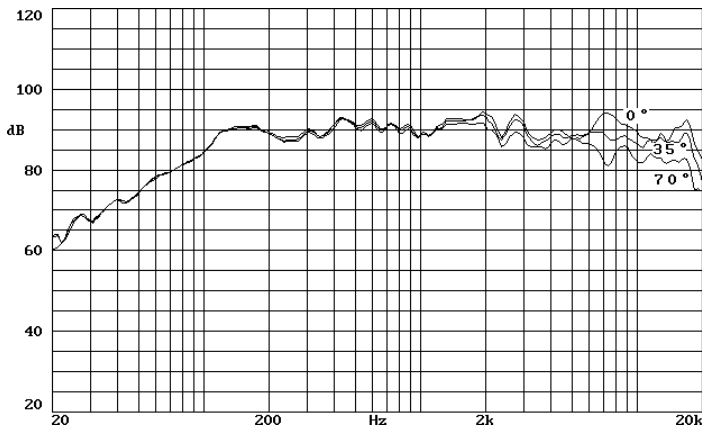


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m. Crossover frequency set at 2.8kHz@12dB/oct.

LF/HF DRIVER RESPONSE



OFF-AXIS FREQUENCY RESPONSE

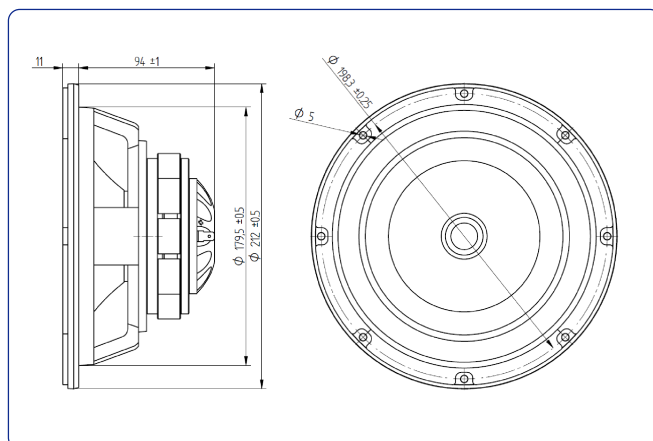


KEY FEATURES

- High power handling: 300/40 w AES (LF/HF)
- High sensitivity: 96/102 dB (LF/HF)
- Low resonant frequency: 57 Hz
- Extended controlled displacement: $X_{max} \pm 6\text{mm}$
- Extended mechanical displacement capability: $X_{damage} \pm 24\text{mm}$
- Designed with MMSS technology for high control, symmetry and linearity
- Demodulating ring for low harmonic distortion
- CONEX spider for higher resistance and consistency
- Waterproof Carbon Fiber loaded paper cone with Santoprene™ surround for high efficiency
- Excellent off-axis response
- 70° conical dispersion
- PM4 diaphragm for natural sound



DIMENSION DRAWINGS



TECHNICAL SPECIFICATIONS

Nominal diameter	200 mm. 8 in.
Rated impedance	8 ohms
Minimum impedance	6.1 ohms
Power capacity*(LF/HF)	300 / 40 w AES
Program power(LF/HF)	600 / 80 w
Sensitivity (LF/HF)	96 dB / 102 dB 1W @ 1m @ 2π
Frequency range	40 - 20000 Hz
Recom. enclosure vol.	10/20 l. 0.35/0.7 ft. ³
Voice coil diameter	63.5 mm. 2.5 in.
Magnetic assembly weight	1.9 kg. 4.18 lb.
BL factor	9.85 N / A
Moving mass	0.014 kg.
Voice coil length	15 mm
Air gap height	7 mm
X damage (peak to peak)	24 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, fs	57 Hz
D.C. Voice coil resistance, Re	5 ohms
Mechanical Quality Factor, Qms	9.25
Electrical Quality Factor, Qes	0.27
Total Quality Factor, Qts	0.26
Equivalent Air Volume to Cms, Vas	35 l
Mechanical Compliance, Cms	517 μm / N
Mechanical Resistance, Rms	0.57 kg / s
Efficiency, ηo (%)	2.43
Effective Surface Area, Sd (m ²)	0.0220 m ²
Maximum Displacement, Xmax***	6 mm
Displacement Volume, Vd	132 cm ³
Voice Coil Inductance, Le @ 1 kHz	0.19 mH

MOUNTING INFORMATION

Overall diameter	212 mm.	6.10 in.
Bolt circle diameter	198 mm.	5.57 in.
Baffle cutout diameter:		
- Front mount	181 mm.	7.12 in.
- Rear mount	183 mm.	7.20 in.
Overall Depth	105 mm.	4.13 in.
Mounting Depth	94 mm.	3.7 in.
Volume displaced by driver	1.5 l.	0.056 ft. ³
Net weight	2.6 kg.	5.72 lb.
Shipping weight	3 kg.	6.6 lb.

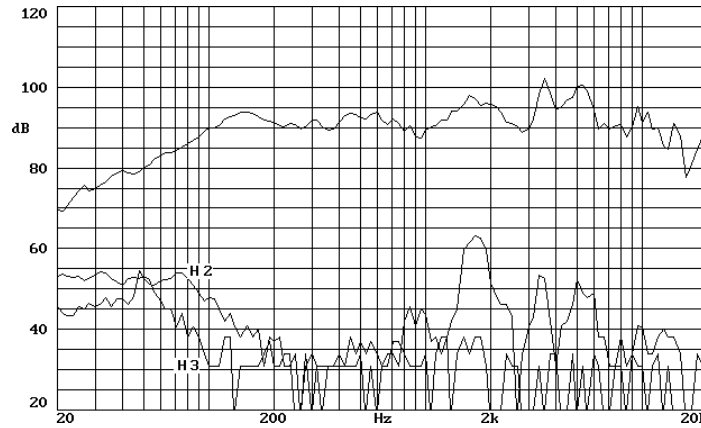
Notes:

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

**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).

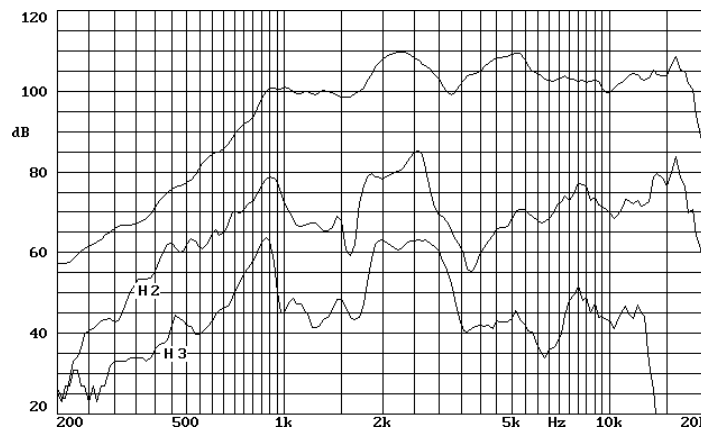
***The Xmax is calculated as $(L_{vc} - H_{ag})/2 + H_{ag}/3.5$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

LF FREQUENCY RESPONSE AND DISTORTION



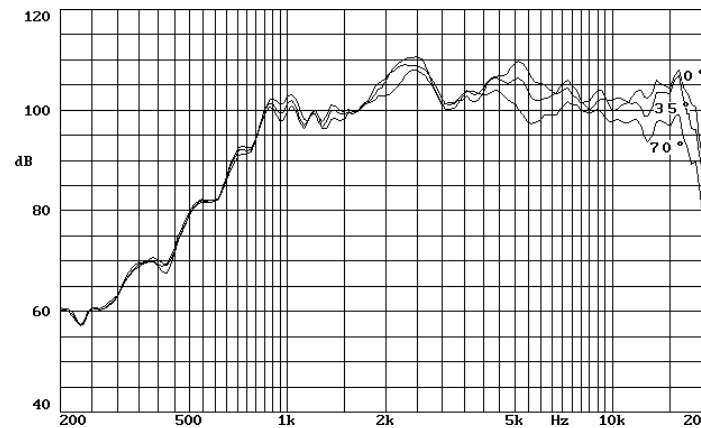
Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2.83V @ 1m.

HF FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2.83V @ 1m.

OFF-AXIS HF FREQUENCY RESPONSE



KEY FEATURES

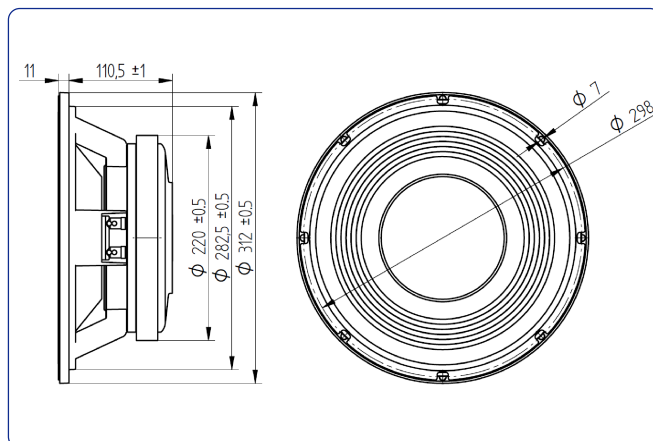
- High power handling: 700 w AES
- High sensitivity: 96 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- CONEX spider for higher resistance and consistency
- Waterproof treatment for both sides of the cone
- 4" DUO double layer inner/outer voice coil
- Extended controlled displacement: $X_{max} \pm 9$ mm
- Massive mechanical displacement capability: $X_{damage} \pm 58$ mm



TECHNICAL SPECIFICATIONS

Nominal diameter	300mm. 12 in.
Rated impedance	8 ohms
Minimum impedance	7.1 ohms
Power capacity*	700 w AES
Program power	1400 w
Sensitivity	96 dB 2.83v @ 1m @ 2π
Frequency range	35 - 2000 Hz
Recom. enclosure vol.	12 / 60 l 0.7 / 2.24 ft. ³
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	9 kg. 19.84 lb.
BL factor	20 N / A
Moving mass	0.102 kg.
Voice coil length	20 mm
Air gap height	10 mm
X damage (peak to peak)	58 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	49 Hz
D.C. Voice coil resistance, R_e	5.1 ohms
Mechanical Quality Factor, Q_{ms}	15.3
Electrical Quality Factor, Q_{es}	0.4
Total Quality Factor, Q_{ts}	0.38
Equivalent Air Volume to C_{ms} , V_{as}	43l
Mechanical Compliance, C_{ms}	99 μm / N
Mechanical Resistance, R_{ms}	2.1 kg / s
Efficiency, η_o (%)	1.21
Effective Surface Area, S_d (m ²)	0.055 m ²
Maximum Displacement, X_{max} ***	9 mm
Displacement Volume, V_d	500 cm ³
Voice Coil Inductance, L_e @ Z_{min}	2.1 mH

MOUNTING INFORMATION

Overall diameter	312 mm.	12.28 in.
Bolt circle diameter	298 mm.	11.73 in.
Baffle cutout diameter:		
- Front mount	283 mm.	11.14 in.
- Rear mount	280 mm.	11.02 in.
Depth	123 mm.	4.84 in.
Volume displaced by driver	5,5 l.	0.14 ft. ³
Net weight	9.7kg.	21.39 lb.
Shipping weight	10.4 kg.	22.92 lb.

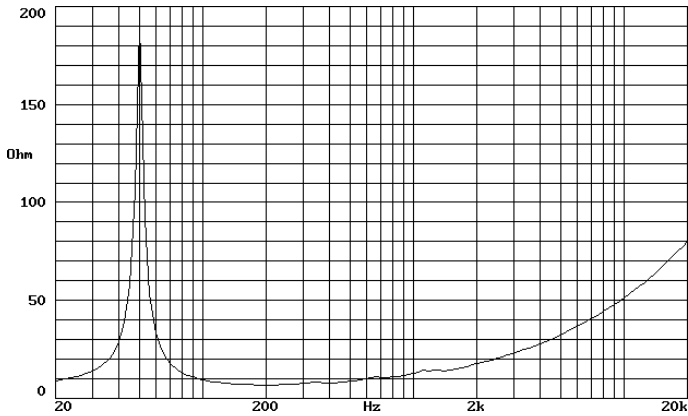
Notes:

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

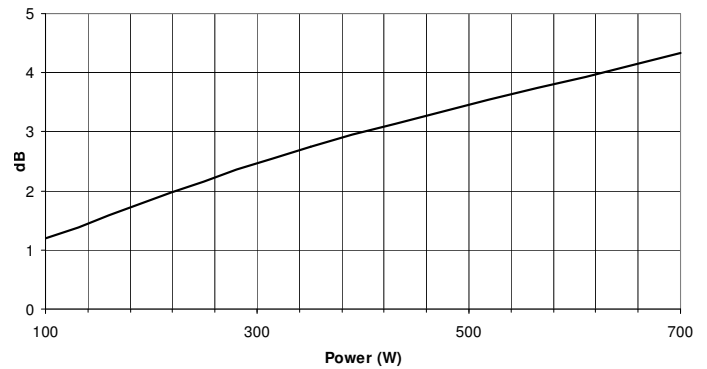
**T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

***The X_{max} is calculated as $(L_{vc} - Hag)/2 + Hag/3.5$, where L_{vc} is the voice coil length and Hag is the air gap height.

FREE AIR IMPEDANCE CURVE

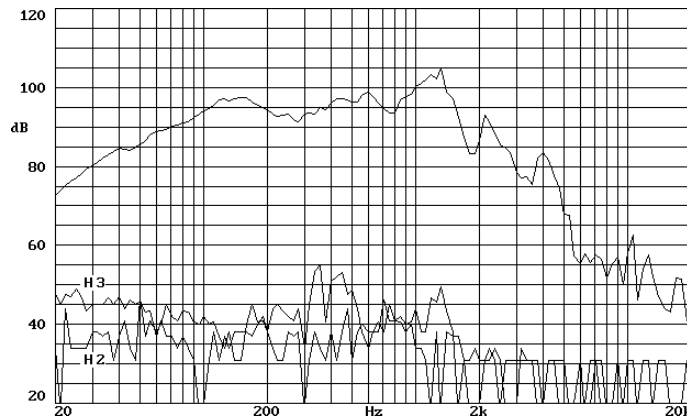


POWER COMPRESSION LOSSES



Note: Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 50 and 500 Hz.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2.83V @ 1m.

KEY FEATURES

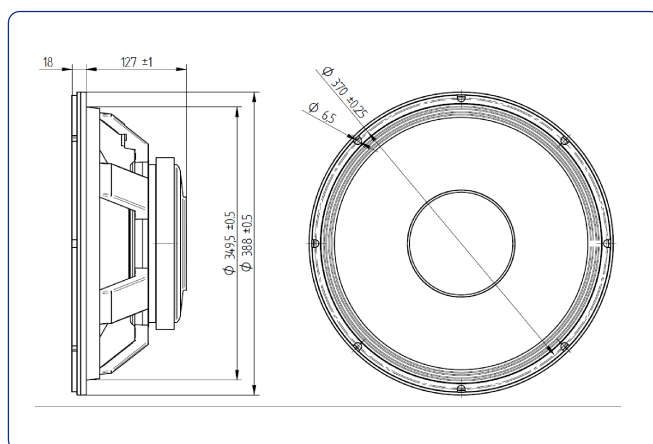
- High power handling: 700 w AES
- High sensitivity: 98 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- CONEX spider for higher resistance and consistency
- Waterproof treatment for both sides of the cone
- 4" DUO double layer inner/outer voice coil
- Extended controlled displacement: $X_{max} \pm 9$ mm
- Massive mechanical displacement capability: $X_{damage} \pm 58$ mm



TECHNICAL SPECIFICATIONS

Nominal diameter	380mm. 15 in.
Rated impedance	8 ohms
Minimum impedance	7.2 ohms
Power capacity*	700 w AES
Program power	1400 w
Sensitivity	98 dB 2.83v @ 1m @ 2π
Frequency range	30 - 1500 Hz
Recom. enclosure vol.	60 / 150 l 2.24 / 6 ft. ³
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	9 kg. 19.84 lb.
BL factor	21,1 N / A
Moving mass	0.147 kg.
Voice coil length	20 mm
Air gap height	10 mm
X damage (peak to peak)	58 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, fs	42 Hz
D.C. Voice coil resistance, Re	5.1 ohms
Mechanical Quality Factor, Qms	21.23
Electrical Quality Factor, Qes	0.45
Total Quality Factor, Qts	0.44
Equivalent Air Volume to Cms, Vas	105.53l
Mechanical Compliance, Cms	92.4 μm / N
Mechanical Resistance, Rms	1.9 kg / s
Efficiency, ηo (%)	1.67
Effective Surface Area, Sd (m ²)	0.091 m ²
Maximum Displacement, Xmax***	9 mm
Displacement Volume, Vd	812 cm ³
Voice Coil Inductance, Le @ Zmin	2.1 mH

MOUNTING INFORMATION

Overall diameter	388 mm.	15.28 in.
Bolt circle diameter	370 mm.	14.56 in.
Baffle cutout diameter:		
- Front mount	352 mm.	13.86 in.
- Rear mount	355 mm.	13.98 in.
Depth	145 mm.	5.70 in.
Volume displaced by driver	7 l.	0.14 ft. ³
Net weight	10.2kg.	21.39 lb.
Shipping weight	11.3 kg.	22.92 lb.

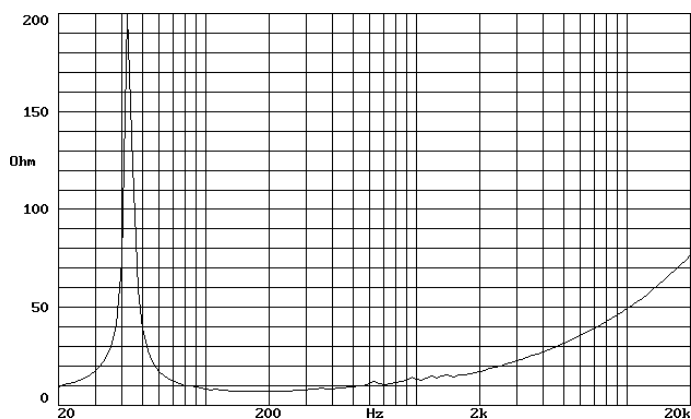
Notes:

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

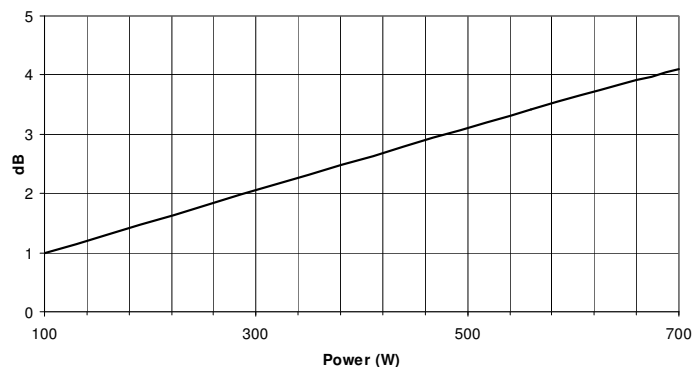
**T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

***The Xmax is calculated as $(Lvc - Hag)/2 + Hag/3.5$, where Lvc is the voice coil length and Hag is the air gap height.

FREE AIR IMPEDANCE CURVE

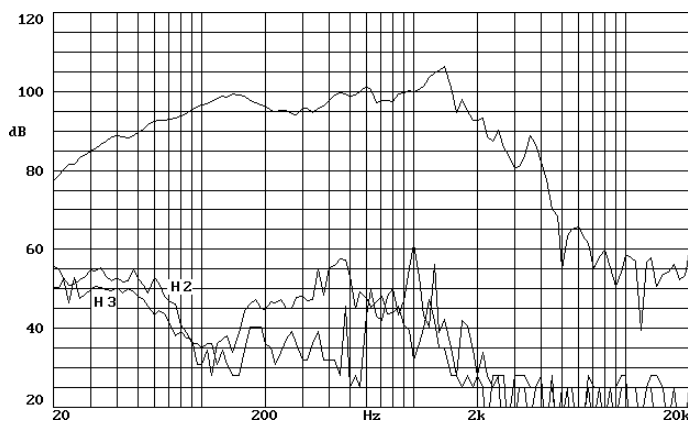


POWER COMPRESSION LOSSES



Note: Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 50 and 500 Hz.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2.83V @ 1m.

KEY FEATURES

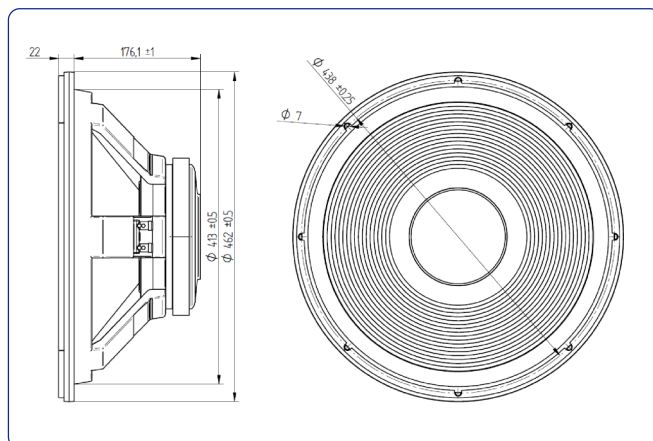
- High power handling: 700 w AES
- High sensitivity: 98 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- CONEX spider for higher resistance and consistency
- Waterproof treatment for both sides of the cone
- 4" DUO double layer inner/outer voice coil
- Extended controlled displacement: $X_{max} \pm 9$ mm
- Massive mechanical displacement capability: $X_{damage} \pm 58$ mm



TECHNICAL SPECIFICATIONS

Nominal diameter	460mm. 18 in.
Rated impedance	8 ohms
Minimum impedance	6.4 ohms
Power capacity*	700 w AES
Program power	1400 w
Sensitivity	98 dB 2.83v @ 1m @ 2π
Frequency range	25 - 1000 Hz
Recom. enclosure vol.	80 / 250 l 2.8 / 8.8 ft. ³
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	9 kg. 19.84 lb.
BL factor	21,8 N / A
Moving mass	0.215 kg.
Voice coil length	20 mm
Air gap height	10 mm
X damage (peak to peak)	58 mm

DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	460 mm. 18.11 in.
Bolt circle diameter	438 mm. 17.24 in.
Baffle cutout diameter:	
- Front mount	413 mm. 16.26 in.
- Rear mount	418 mm. 16.46 in.
Depth	200 mm. 7.87 in.
Volume displaced by driver	13 l. 0.46 ft. ³
Net weight	11.7 kg. 25.7 lb.
Shipping weight	13.2 kg. 29.04 lb.

Notes:

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

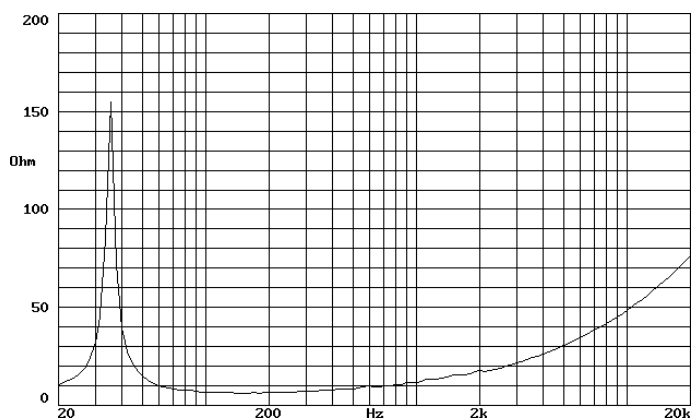
**T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

***The X_{max} is calculated as $(L_{vc} - Hag)/2 + Hag/3.5$, where L_{vc} is the voice coil length and Hag is the air gap height.

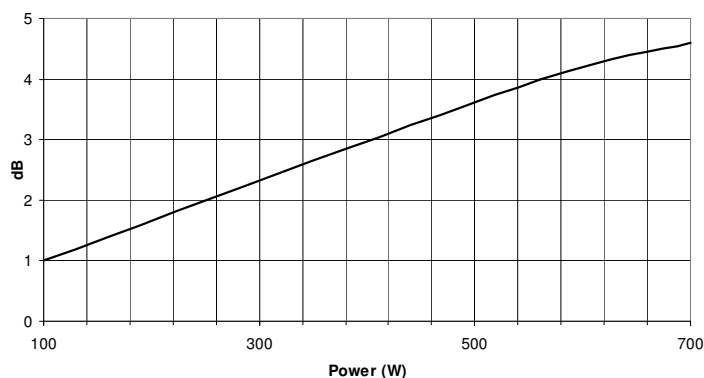
THIELE-SMALL PARAMETERS**

Resonant frequency, fs	35 Hz
D.C. Voice coil resistance, Re	5.1 ohms
Mechanical Quality Factor, Qms	15.72
Electrical Quality Factor, Qes	0.5
Total Quality Factor, Qts	0.48
Equivalent Air Volume to Cms, Vas	236.52 l
Mechanical Compliance, Cms	94.5 μm / N
Mechanical Resistance, Rms	3.04 kg / s
Efficiency, ηo (%)	1.91
Effective Surface Area, Sd (m ²)	0.1320 m ²
Maximum Displacement, Xmax***	9 mm
Displacement Volume, Vd	1178 cm ³
Voice Coil Inductance, Le @ Zmin	2.1 mH

FREE AIR IMPEDANCE CURVE

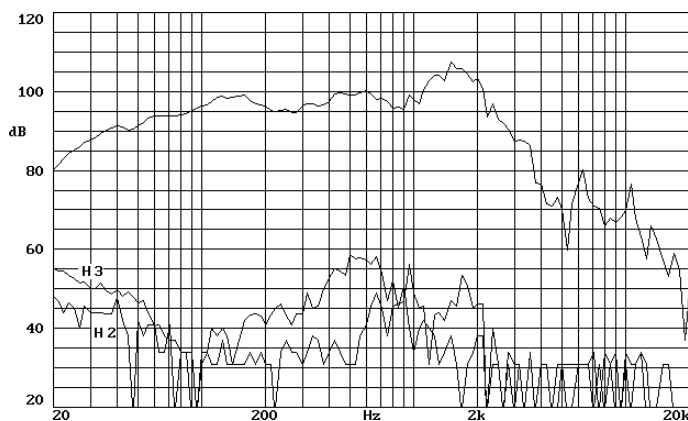


POWER COMPRESSION LOSSES



Note: Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 50 and 500 Hz.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2.83V @ 1m.

KEY FEATURES

- 1 in. (25mm) high frequency compression driver
- 109 dB, 2.83V@1m sensitivity
- Improved moving assembly mechanical coupling for excellent power handling capabilities
- PM-4 polymer diaphragm with higher surface tension energy
- Ultra lightweight edgewound aluminium ribbon voice coil
- Aluminum cover
- Ferrite magnet

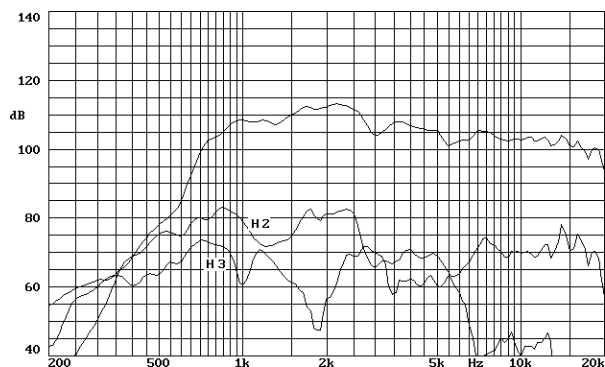
TECHNICAL SPECIFICATIONS

Throat diameter	25 mm. 1 in.
Rated impedance	8 ohms.
D.C. Resistance	4.3 ohms.
Power capacity *	70 w AES above 1.2 kHz
Program power	140 w above 1.2 kHz
Sensitivity **	109 dB 2.83V @ 1m coupled to TD-164 prototype horn
Frequency range	0.7 - 19 kHz
Recommended crossover	1.2 kHz or higher (12 dB/oct. min.)
Voice coil diameter	44.4 mm. 1.75 in.
Magnetic assembly weight	1.2 kg. 2.64 lb.
Flux density	1.65 T
BL factor	6.6 N/A

MOUNTING INFORMATION

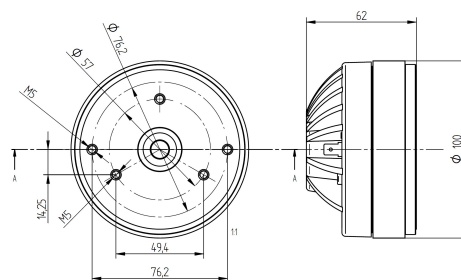
Overall diameter	102 mm. 4 in.
Depth	62 mm. 2.44 in.
Mounting	Three M5 threaded holes, 120° apart on 57 mm. (2.24 in.) diameter circle. Two M5 threaded holes, 180° apart on 76.2 mm. (3 in.) diameter circle.
Net weight	1.3 kg. 2.86 lb.
Shipping weight	1.4 kg. 3.1 lb.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured coupled to TD-164 horn in anechoic chamber, 2.83V @ 1m.

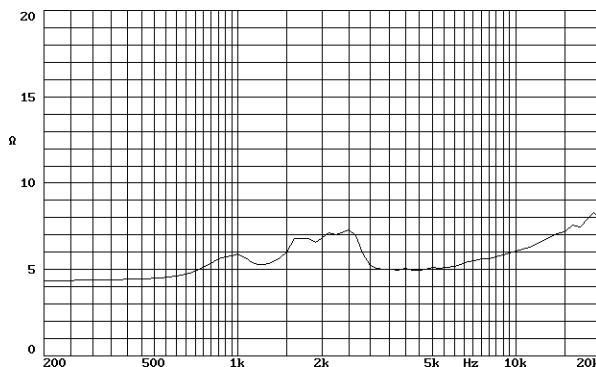
DIMENSION DRAWINGS



Notes:

*The power capacity 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 1 m distance, on axis, with 2.83V input, averaged in the range 1-7 kHz.

FREE AIR IMPEDANCE CURVE



KEY FEATURES

- 1 in. (25mm) high frequency compression driver
- 111 dB, 2.83V@1m sensitivity
- Improved moving assembly mechanical coupling for excellent power handling capabilities
- PM-4 polymer diaphragm with higher surface tension energy
- Ultra lightweight edgewound aluminium ribbon voice coil
- Aluminum cover
- Neodymium magnet

TECHNICAL SPECIFICATIONS

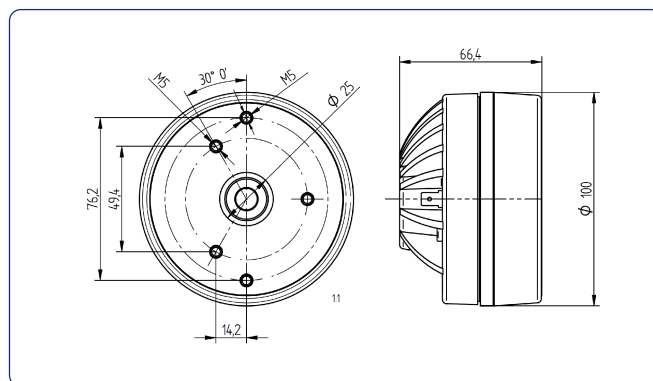
Throat diameter	25 mm. 1 in.
Rated impedance	8 ohms.
D.C. Resistance	4.3 ohms.
Power capacity *	70 w AES above 1.2 kHz
Program power	140 w above 1.2 kHz
Sensitivity **	111 dB 2.83V @ 1m coupled to TD-164 prototype horn
Frequency range	0.7 - 19 kHz
Recommended crossover	1.2 kHz or higher (12 dB/oct. min.)
Voice coil diameter	44.4 mm. 1.75 in.
Magnetic assembly weight	1.1 kg. 2.42 lb.
Flux density	2.2 T
BL factor	8.9 N/A

MOUNTING INFORMATION

Overall diameter	100 mm. 4 in.
Depth	66.4 mm. 2.61 in.
Mounting	Three M5 threaded holes, 120° apart on 57 mm. (2.24 in.) diameter circle. Two M5 threaded holes, 180° apart on 76.2 mm. (3 in.) diameter circle.
Net weight	1.2 kg. 2.64 lb.
Shipping weight	1.3 kg. 2.86 lb.



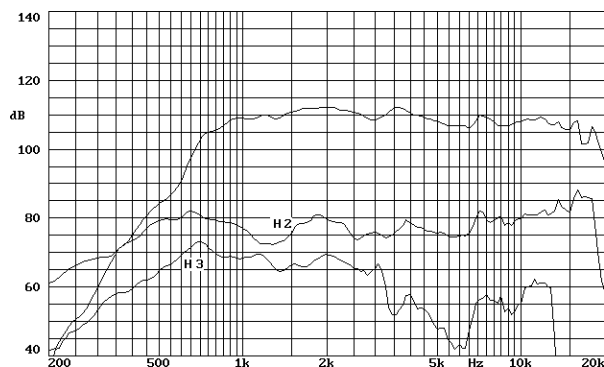
DIMENSION DRAWINGS



Notes:

*The power capacity 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 1 m distance, on axis, with 2.83V input, averaged in the range 1-7 kHz.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured coupled to TD-164 horn in anechoic chamber, 2.83V @ 1m.

FREE AIR IMPEDANCE CURVE

