

# 15CXA400Fe COAXIAL TRANSDUCER

#### **KEY FEATURES**

- 15" coaxial with 4" voice coil woofer and 2,85" voice coil compression driver
- Program power: 800 / 160 W<sub>AES</sub> (LF / HF)
- Sensitivity: 98 dB LF and 105 dB HF
- · Common ferrite magnet system design
- Demodulating rings in both LF and HF units
- Composite titanium / mylar diaphragm
- Waterproof LF cone
- 60° coverage horn for HF dispersion control



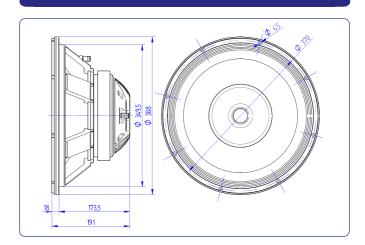
Nominal diameter 380 mm 15 in Rated impedance (LF/HF) $8 / 16 \Omega$ Minimum impedance (LF/HF) $6,3 / 11,3 \Omega$ Power capacity* (LF/HF) $400 / 80 \text{ W}_{AES}$ Program power (LF/HF) $800 / 160 \text{ W}$ Sensitivity (LF/HF**) $98 \text{ dB}  1W @ Z_N$ $105 $				
$\begin{array}{lll} \mbox{Minimum impedance (LF/HF)} & 6,3 \ / \ 11,3 \ \Omega \\ \mbox{Power capacity* (LF/HF)} & 400 \ / \ 80 \ W_{AES} \\ \mbox{Program power (LF/HF)} & 800 \ / \ 160 \ W \\ \mbox{Sensitivity (LF/HF**)} & 98 \ dB \ 1W \ @ \ Z_N \\ 105 \ dB \ 1W \ M_N $	Nominal diameter	380 mm 15 in		
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Power capacity* (LF/HF)	400 / 80 W <sub>AES</sub>		
Frequency range $35 - 20.000 \text{ Hz}$ Recom. HF crossover $1,5 \text{ kHz or higher} \\ \text{Voice coil diameter (LF/HF)} \\ \text{D10},6 \text{ mm} \\ \text{Voice coil diameter} \\ \text{S2},2 \text{ mm} \\ \text{S3},2 \text{ N/A} \\ \text{Moving mass} \\ \text{Voice coil length} \\ \text{Air gap height} \\ \text{S3} - 20.000 \text{ Hz} \\ \text{S4} \text{ N/Bercond Hz} \\ \text{S5} \text{ N/Bercond Hz} \\ \text{S6}  N/Bercond$	Program power (LF/HF)	800 / 160 W		
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Sensitivity (LF/HF**)	98 dB 1W @ Z <sub>N</sub>		
Recom. HF crossover         1,5 kHz or higher (12 dB/oct min slope)           Voice coil diameter (LF/HF)         101,6 mm / 2,2 mm / 2,87 in           BL factor         18,2 N/A           Moving mass         0,090 kg           Voice coil length         16 mm           Air gap height         10 mm	-	105 dB 1W @ Z <sub>N</sub>		
Voice coil diameter (LF/HF)  101,6 mm	Frequency range	35 - 20.000 Hz		
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BL factor18,2 N/AMoving mass0,090 kgVoice coil length16 mmAir gap height10 mm	Voice coil diameter (LF/HF)	101,6 mm 4 in		
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Voice coil length 16 mm Air gap height 10 mm	BL factor	18,2 N/A		
Air gap height 10 mm	Moving mass	0,090 kg		
• •	Voice coil length	16 mm		
Y. (neak to neak) 51 mm	Air gap height	10 mm		
Adamage (Peak to Peak)	X <sub>damage</sub> (peak to peak)	51 mm		

## THIELE-SMALL PARAMETERS\*\*\*

Resonant frequency, f <sub>s</sub>	40 Hz
D.C. Voice coil resistance, R <sub>e</sub>	6,3Ω
Mechanical Quality Factor, Q <sub>ms</sub>	16,4
Electrical Quality Factor, Qes	0,43
Total Quality Factor, Q <sub>ts</sub>	0,42
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	191 I
Mechanical Compliance, C <sub>ms</sub>	175 μm / N
Mechanical Resistance, R <sub>ms</sub>	1,38 kg / s
Efficiency, η <sub>0</sub>	2,75 %
Effective Surface Area, S <sub>d</sub>	0,088 m <sup>2</sup>
Maximum Displacement, X <sub>max</sub> ****	6 mm
Displacement Volume, V <sub>d</sub>	350 cm <sup>3</sup>
Voice Coil Inductance, L <sub>e</sub> @ 1 kHz	0,95 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	349,5 mm	13,76 in
Depth	185 mm	7,3 in
Volume displaced by driver	7 I	0,25 ft <sup>3</sup>
Net weight	11,9 kg	26,2 lb
Shipping weight	12,4 kg	27,3 lb

#### Notes:

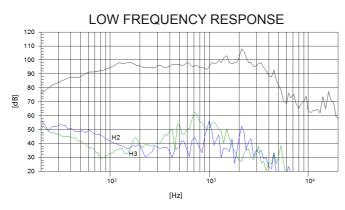
- \* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.
- $^{\star\star}$  Sensitivity was measured at 1m distance, on axis, with 1W input, averaged in the range 1 7 kHz.
- \*\*\* T-S 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.

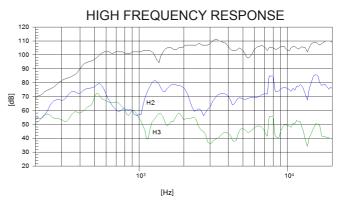


# 15CXA400Fe

**COAXIAL TRANSDUCER** 

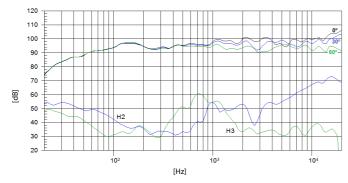
## FREQUENCY RESPONSE AND DISTORTION





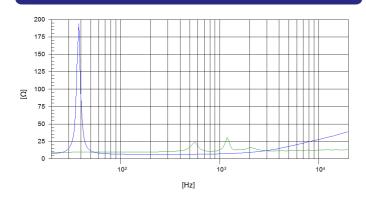
Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

### FILTERED FREQUENCY RESPONSE

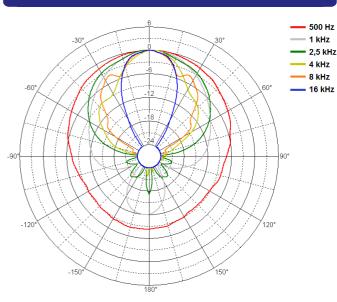


Note: Filtered frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m with FD-2XA

### FREE AIR IMPEDANCE CURVE



### **POLAR PATTERN**



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