

5320 8Ω 5370 4Ω **B38** PROFESSIONAL SERIES

15" Bass Midrange Drivers Very High Sound Pressure Level High Sounding Quality

APPLICATIONS

These models, while derived from SP5050 are optimized for very high SPL two or three way sound reinforcement systems of high sounding quality.

The object of our research was the development of a lighter cone assembly to optimize sensitivity without decreasing toughness and life duration.

The challenge is successful with our special treatment of both sides of the cone which allows it to withstand tremendous SPL at very low harmonic distortion levels.

Thus, these models can be used far into the midrange frequencies (over 1.2 kHz if needed) without sacrificing sound quality.

Optimum acoustical load is Reflex enclosure from 45L to 70L tuned around 46 Hz.

DESIGN CONCEPT

DEFLECTION CONTROLLED DIAPHRAGM optimized for dynamic damping. DEFLECTION CONTROLLED DIAPHRAGM technology consists in optimizing the shape and material of the diaphragm so that it works as a mechanical transmission line, to avoid breaking modes as well as mechanical threshold which destroy sound quality.

This leading edge technology offers substantial sonic advantages. Among them: sound coherency, fast transients, stable sound imaging, high sensitivity, wide frequency range and reduced directivity pattern.

VENTED COMPACT MAGNET SYSTEM. It has been carefully optimized to obtain maximum transducing efficiency while avoiding unlinear behavior such as coil inductance variation with position, flux modulation, harmonic distortion, rest position offset, air compression and off-axis voice-coil pushing.

Its design incorporates a T-shaped and vented pole piece, and a flux stabilization ring. It also takes into consideration demagnetization at cold temperatures.

INTERCOOLER SYSTEM (patented). Entirely integrated into the loudspeaker itself, the INTERCOOLER SYSTEM extracts the heat produced by Joule effect in the voice-coil by the means of an air flow directed through the heatsink rims of the basket by the motion of the dust-cap and the spider.

The gain brought about by this technology is over 20 % of extra power, so for example, a 3" coil according to this design has the same power handling capacity as a classical 4" one.



FEATURES

Power handling capacity500 W AESReference efficiency (1W @ 1m)99 dB SPLSPLmax(continuous)122 dB SPLUsable frequency range40-2000 HzEnvironmental withstandingOutdoor+

ARCHITECTURAL SPECIFICATIONS

NOMINAL DIAMETER : 380 mm.

FRAME : High tensile alloy pressure die-cast basket with patented INTERCOOLER SYSTEM.

MAGNET SYSTEM : 3" highly energized, heat extracting design with vented pole piece and flux stabilizing ring.

VOICE COIL : High-temperature stabilized copper ribbon wound on high-strength glass polyimide former.

CONE ASSEMBLY : High-strength cellulose fiber cone and central dome impregnated and coated on both sides with damped resins, fitted with double roll treated and damped fabric surround.

SPEAKER MASS : 9.10 kg.

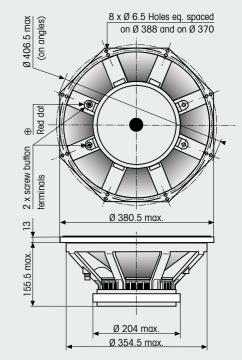
5320 - 5370

15" Bass Midrange Drivers

5320 5370

TYPICAL CHARACTERISTICS					
Rated impedance	Z	8	4	Ω	
Reference efficiency (1 W@1 m)	-	99	99	dB SPL	
Usable frequency range ¹	-	40-2000	40-2000	Hz	
Power handling capacity ² (AES)	-	500	500	W	
Max Sound Pressure Level ³	SPL _{max}	122	122	dB SPL	
Min. impedance modulus	Z _{min}	6.2 @ 240Hz	3.2 @ 260Hz	Ω	
Voice-coil inductance 4 @ 1 kHz	Lelk	1.47	0.74	mH	
@ 10 kHz	L _{e10k}	0.61	0.31	тH	
Bl product	BI	23.4	16.4	N/A	
Moving mass	M _{ms}	0.109	0.109	Kg	
THIELE-SMALL PARAMETERS : TYPICAL (QC LIN	/ITS)				
Resonance frequency ⁵	Fs	45 (±6)	45 (±6)	Hz	
DC resistance ⁶	Re	5.6 (±0.5)	3.0 (±0.3)	Ω	
Mechanical quality factor	Q _{ms}	3.9	3.9	1	
Electrical quality factor	Q _{es}	0.31	0.34	1	
Total quality factor	Q _{ts}	0.28	0.32	1	
Mechanical suspension compliance	C _{ms}	116	116	10 ^{-₀} m/N	
Effective piston area	Sd	0.0892	0.0892	m ²	
Equivalent C _{as} air Ioad	V _{as}	0.128	0.128	m³	
Max. linear excursion	X _{max}	± 7.0	± 7.0	mm	
Linear displacement volume	Vd	0.624	0.624	10 ⁻³ m ³	
Half-space efficiency		3.6	3.3	%	
Unity load volume	$V_{as}Q_{ts}^{2}$	10.9	12.7	10 ⁻³ m ³	
ABSOLUTE MAXIMUM RATINGS					
Short term max. input voltage 7	V _{max}	125	90	V	
Max. excursion before damage	X _{dam}	14	14	mm	
Ambient operating temperature		-10 to +{	50	°C	
Storage temperature ⁸		-20 to +7	70	°C	
Environmental conditions °	Outdoor +				
APPLICATION INFORMATION					
Air volume occupied by the driver ¹⁰		4.3	4.3	10 ⁻³ m ³	
Speaker net mass		9.1	9.1	Kg	
Recommended reflex box	V _b /F _b	65 / 46		L / Hz	
Electrical polarity	A positive voltage applied on the red				
	terminal produces forward cone motion.				





SPECIFICATION NOTES

- Note 1 : Allowing for energy response, excursion capability, Power spectrum, and -3dB low freq. roll-off for standard reflex tuning.
- Note 2 : Established at 20°C ambient temp, according to AES2-1984 standard using IEC268-1 simulated programme signal and a 75 liter Bass-Reflex test enclosure tuned at 45Hz.
- Note 3 : Established at 1m on axis of the loudspeaker mounted in fest enclosure, when driven at full AES Power Handling Capacity, including 4dB of thermal compression loss.
- Note 4 : Measured at 20 mA in free air.
- Note 5 : Measured at 20 mA and 20°C ambient temp. in free air conditions, after full run and rest.
- Note 6 : Measured at 20°C ambient temp. QC limits are ±10%
- Note 7 : Stated in RMS voltage according to IEC 268-5.
- Note 8 : Includes shipping conditions. The lower limit prevents from demagnetization.
- Note 9: Our products are classified in three categories : Indoor, Outdoor, and Outdoor+ for permanent outdoor use or severe conditions.
- Note 10 : Calculated for front mounting on to a 18 mm thick board.

