



1330 8 Ω
1290 16 Ω

B17

PROFESSIONAL SERIES

6.5" Bass Midrange Drivers High Sound Pressure Level High Efficiency - Contact Class

APPLICATIONS

Dedicated to proximity sound reinforcement systems these models are optimum for two way Bass-Reflex systems using one or two drivers per system, with a X-over frequency situated around 3kHz to 5kHz.

Their particular design prevents over-excursion damage making them extremely rugged without any counterpart in the sound which remains accurate and dynamic.

Recommended Reflex enclosure is 10L to 12L tuned from 60Hz to 65Hz.

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.

SOFT EXCURSION LIMITING. The SOFT EXCURSION LIMITING mechanism is a special S-profile design of the rubber surround avoiding voice-coil bottoming which destroys driver functionality instantaneously.

The cone excursion is progressively limited to +/- 8mm, introducing a soft clipping which totally protects loudspeakers from over-excursion damage.

COMPACT MAGNET SYSTEM Its design has been specially 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 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 capacity **100 W AES**
Reference efficiency (1W @ 1m) **94 dB SPL**
SPL max (continuous) **110 dB SPL**
Usable frequency range **50-4000 Hz**
Environmental withstanding **Outdoor**

ARCHITECTURAL SPECIFICATIONS

NOMINAL DIAMETER : 166 mm.

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

MAGNET SYSTEM : 1.5" highly energized, heat extracting design.

VOICE COIL : High-temperature stabilized copper wire wound on vented, high-strength glass polyimide.

CONE ASSEMBLY : High-strength cellulose fiber cone and central dome impregnated and front-coated with damped resins, fitted with S-shaped viscoelastic damped neoprene surround.

SPEAKER MASS : 2.15 Kg.

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6.5" Bass Midrange Drivers

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TYPICAL CHARACTERISTICS

Rated impedance	Z	8	16	Ω
Reference efficiency (1 W@1 m)	-	94	94	dB SPL
Usable frequency range ¹	-	50-4000	50-4000	Hz
Power handling capacity ² (AES)	-	100	100	W
Max Sound Pressure Level ³	SPL _{max}	110	110	dB SPL
Min. impedance modulus	Z _{min}	6.6 @ 370Hz	14.2 @ 330Hz	Ω
Voice-coil inductance ⁴ @ 1 kHz	L _{e1k}	0.72	1.36	mH
	@ 10 kHz	L _{e10k}	0.31	0.50
Bl product	Bl	10.50	13.10	N/A
Moving mass	M _{ms}	0.012	0.012	Kg

THIELE-SMALL PARAMETERS : TYPICAL (QC LIMITS)

Resonance frequency ⁵	F _s	53 (±8)	53 (±8)	Hz
DC resistance ⁶	R _e	6.1 (±0.6)	12.1 (±1.2)	Ω
Mechanical quality factor	Q _{ms}	3.6	3.6	1
Electrical quality factor	Q _{es}	0.22	0.29	1
Total quality factor	Q _{ts}	0.21	0.26	1
Mechanical suspension compliance	C _{ms}	750	750	10 ⁻⁴ m/N
Effective piston area	S _d	0.0143	0.0143	m ²
Equivalent C _{as} air load	V _{as}	0.022	0.022	m ³
Max. linear excursion	X _{max}	±3.5	±3.5	mm
Linear displacement volume	V _d	0.050	0.050	10 ⁻³ m ³
Half-space efficiency		1.4	1.1	%
Unity load volume	V _{as} Q _{ts} ²	0.9	1.5	10 ⁻³ m ³

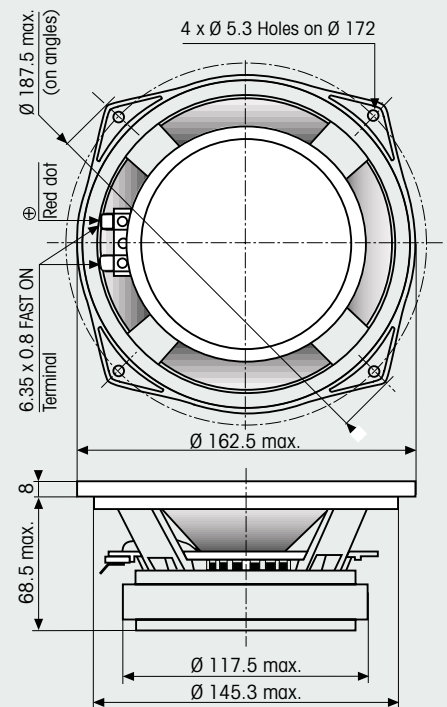
ABSOLUTE MAXIMUM RATINGS

Short term max. input voltage ⁷	V _{max}	60	85	V
Max. excursion before damage	X _{dam}	8.0	8.0	mm
Ambient operating temperature		-10 to +50		°C
Storage temperature ⁸		-20 to +70		°C
Environmental conditions ⁹		Outdoor		

APPLICATION INFORMATION

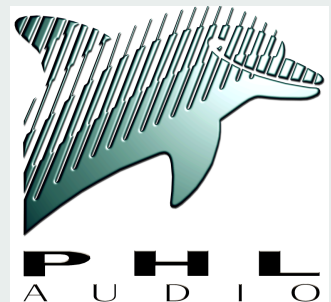
Air volume occupied by the driver ¹⁰		0.5	0.5	10 ⁻³ m ³
Speaker net mass		2.15	2.15	Kg
Recommended reflex box	V _b /F _b	12L / 65 Hz		L / Hz
Electrical polarity		A positive voltage applied on the red terminal produces forward cone motion.		

PHYSICAL CHARACTERISTICS



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 12 liter Bass-Reflex test enclosure tuned at 55Hz.
- Note 3 : Established at 1m on axis of the loudspeaker mounted in test 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.



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