



Model **7010** 8 Ω

B46

Professional Series

18" Bass Extended Driver **High Efficiency** **High Sounding Quality**

APPLICATIONS

The "Seventy-Ten" is one of our best sellers. It was designed for Sound Reinforcement applications in 1995, and fully exploits the capacity of our powerful 4" magnet system, which results in a successful design. The 7010 is a true 18" ($S_d=0.128$ sq. meter) while most of its competitors are 17", which offers extra sensitivity that can reach 1.8 dB at the same displacement figure.

This, combined with the AES Power handling of 1kW, results in a tremendous dynamic capacity to transduce low and very low sound frequencies at particularly low harmonic distortion levels in small volume enclosures.

Recommended Reflex sub-cabinet is 150L to 200L tuned from 36Hz to 38Hz, and highest recommended X-over frequency is 400Hz.

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 capacity	1000W AES
Reference efficiency (1W @ 1m)	98 dB SPL
SPL max (continuous)	124 dB SPL
Usable frequency range	30-800 Hz
Environmental withstanding	Indoor

ARCHITECTURAL SPECIFICATIONS

Nominal diameter : 460 mm.

Frame : Aluminum alloy pressure die-cast basket with patented INTERCOOLER SYSTEM.

Magnet system : 4" 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 impregnated and front-coated with damped resins, fitted with central carbon-fiber dome and double roll treated and damped fabric surround.

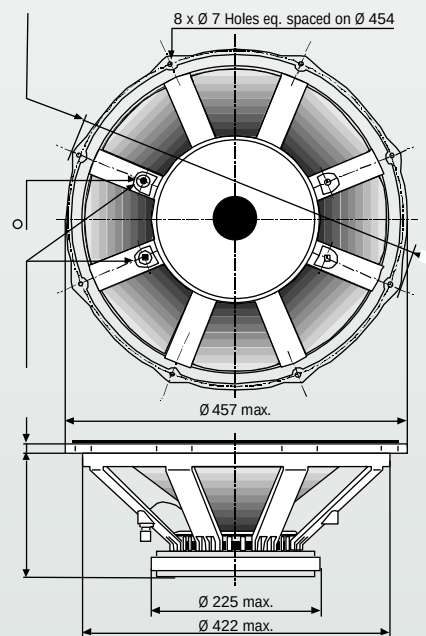
Speaker mass : 10.90 kg

B46 Series
Model 7010
18" Bass Extended Driver

SPECIFICATIONS

Model	7010		
Typical characteristics			
Rated impedance	Z	8	Ω
Reference efficiency (1 W@1 m)	-	98	dB SPL
Usable frequency range ¹	-	30–800	Hz
Power handling capacity ² (AES)	-	1000	W
Max Sound Pressure Level ³	SPL _{max}	124	dB SPL
Min. impedance modulus	Z _{min}	6.8 @ 200Hz	Ω
Voice-coil inductance ⁴ @ 1 kHz	L _{e1k}	1.80	μ H
@ 10 kHz	L _{e10k}	0.87	μ H
Bl product	Bl	22.6	N/A
Moving mass	M _{ms}	0.180	Kg
Thiele-Small parameters : typical (QC limits)			
Resonance frequency ⁵	F _s	35 (±5)	Hz
DC resistance ⁶	R _e	5.6 (±0.5)	Ω
Mechanical quality factor	Q _{ms}	4.0	1
Electrical quality factor	Q _{es}	0.31	1
Total quality factor	Q _{ts}	0.29	1
Mechanical suspension compliance	C _{ms}	115	10 ⁻⁶ m/N
Effective piston area	S _d	0.128	m ²
Equivalent C _{as} air load	V _{as}	0.260	m ³
Max. linear excursion	X _{max}	8.0	mm
Linear displacement volume	V _d	1.024	10 ⁻³ m ³
Half-space efficiency		3.5	%
Unity load volume	V _{as} · Q _{ts} ²	22.3	m ³
Absolute maximum ratings			
Short term max. input voltage ⁷	V _{max}	180	V
Max. excursion before damage	X _{dam}	16	mm
Ambient operating temperature		– 10 to + 50	°C
Storage temperature ⁸		– 20 to + 70	°C
Environmental conditions		Indoor	
Application information			
Air volume occupied by the driver ⁹		6.9	10 ⁻³ m ³
Speaker net mass		10.9	Kg
Recommended reflex box	V _b /F _b	150L/38Hz	10 ⁻³ m ³ /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 / IEC 268-5 Standards, using a 150 liter Bass-Reflex test enclosure tuned at 40Hz.
- 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 : Calculated for front mounting on to a 18 mm thick board.



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Model **7030** 8 Ω

B46

Professional Series

18" Bass Extended Driver High Sounding Performance

APPLICATIONS

This model is intended to be used in Sub-Bass systems when high sounding performance or full outdoor environmental withstanding is requested.

Its main purpose is use in the field of Studio Monitoring. Its large linear displacement volume together with the smooth response up to 1 kHz are ideal for this application.

Recommended acoustical load is in a reflex enclosure of 220 to 300L tuned from 32 to 36 Hz. Maximum recommended X-over freq. is 400 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 capacity **750 W AES**
Reference efficiency (1W @ 1m) **97 dB SPL**
SPL max (continuous) **122 dB SPL**
Usable frequency range **30-1000 Hz**
Environmental withstanding **Tropical**

ARCHITECTURAL SPECIFICATIONS

Nominal diameter : 460 mm.

Frame : Aluminum alloy pressure die-cast basket with patented INTERCOOLER SYSTEM.

Magnet system : 4" highly energized, heat extracting design with vented pole piece and flux stabilizing ring.

Voice coil : High-temperature stabilized copper wire wound on high-strength glass polyimide former.

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

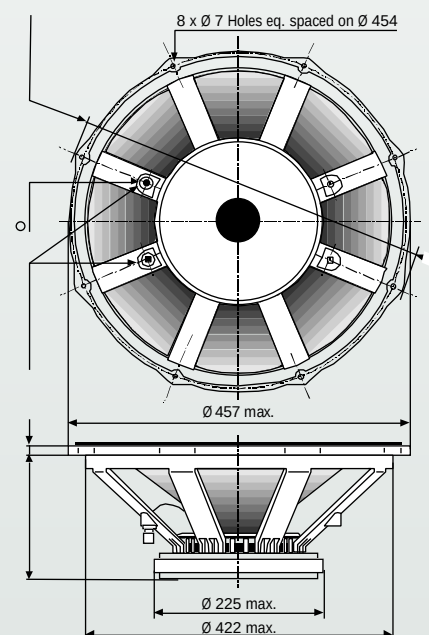
Speaker mass : 10.90 kg

B46 Series
Model 7030
18" Bass Extended Driver

SPECIFICATIONS

Model	7030		
Typical characteristics			
Rated impedance	Z	8	Ω
Reference efficiency (1 W@1 m)	-	97	dB SPL
Usable frequency range ¹	-	30–1000	Hz
Power handling capacity ² (AES)	-	750	W
Max Sound Pressure Level ³	SPL _{max}	122	dB SPL
Min. impedance modulus	Z _{min}	7.0 @ 200Hz	Ω
Voice-coil inductance ⁴ @ 1 kHz	L _{e1k}	1.71	μH
@ 10 kHz	L _{e10k}	0.82	μH
Bl product	Bl	22.7	N/A
Moving mass	M _{ms}	0.180	Kg
Thiele-Small parameters : typical (QC limits)			
Resonance frequency ⁵	F _s	32 (±5)	Hz
DC resistance ⁶	R _e	5.5 (±0.5)	Ω
Mechanical quality factor	Q _{ms}	4.5	1
Electrical quality factor	Q _{es}	0.39	1
Total quality factor	Q _{ts}	0.36	1
Mechanical suspension compliance	C _{ms}	135	10 ⁻⁶ m/N
Effective piston area	S _d	0.128	m ²
Equivalent C _{as} air load	V _{as}	0.315	m ³
Max. linear excursion	X _{max}	8.0	mm
Linear displacement volume	V _d	1.024	10 ⁻³ m ³
Half-space efficiency		2.5	%
Unity load volume	V _{as} · Q _{ts} ²	41.4	m ³
Absolute maximum ratings			
Short term max. input voltage ⁷	V _{max}	160	V
Max. excursion before damage	X _{dam}	16	mm
Ambient operating temperature		– 10 to + 50	°C
Storage temperature ⁸		– 20 to + 70	°C
Environmental conditions		Tropical	
Application information			
Air volume occupied by the driver ⁹		6.9	10 ⁻³ m ³
Speaker net mass		10.9	Kg
Recommended reflex box	V _b /F _b	250L/35Hz	10 ⁻³ m ³ /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 / IEC 268-5 Standards, using a 150 liter Bass-Reflex test enclosure tuned at 40Hz.
- 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 : Calculated for front mounting on to a 18 mm thick board.



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Models **7080** 8 Ω
7050 6 Ω

18" Bass Extended Drivers High Efficiency Contact Class

APPLICATIONS

Built with the same concepts as SP7010, this model which belongs to our Sound Reinforcement Contact Class is equipped with a classical two layer coil, which makes it preferable when Sub-Bass extension is required.

The result is the need for larger Reflex enclosures (220L to 300L tuned from 33Hz to 36 Hz) with the counterpart of reduced AES power handling of 750W.

SP7080/7050 can also be X-overed up to 400 Hz, and exhibits a good quality to price ratio.

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.

B46

Professional Series



FEATURES

Power handling capacity **750 W AES**
Reference efficiency (1W @ 1m) **97 dB SPL**
SPL max (continuous) **122dB SPL**
Usable frequency range **30-800 Hz**
Environmental withstanding **Indoor**

ARCHITECTURAL SPECIFICATIONS

Nominal diameter : 460 mm.

Frame : Aluminum alloy pressure die-cast basket with patented INTERCOOLER SYSTEM.

Magnet system : 4" highly energized, heat extracting design with vented pole piece and flux stabilizing ring.

Voice coil : High-temperature stabilized copper wire wound on high-strength glass polyimide former.

Cone assembly : High-strength cellulose fiber cone impregnated and front-coated with damped resins, fitted with central carbon-fiber dome and high compliance treated double roll fabric surround.

Speaker mass : 10.80 kg.

B46 Series

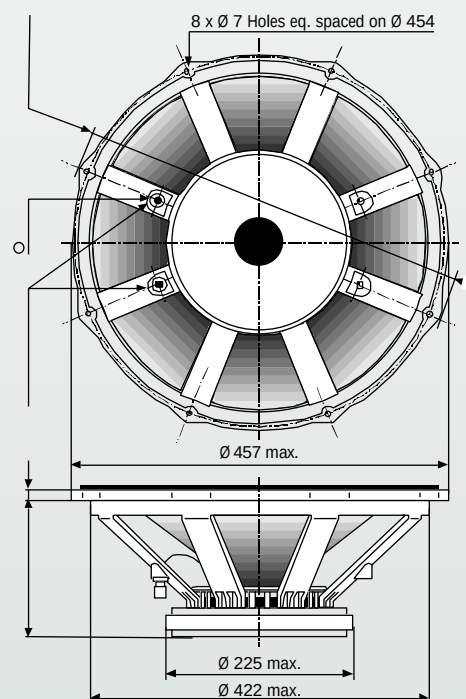
Models 7080 n 7050

18" Bass Extended Drivers

SPECIFICATIONS

Model		7080	7050	
Typical characteristics				
Rated impedance	Z	8	6	Ω
Reference efficiency (1 W@1 m)	-	97	97	dB SPL
Usable frequency range ¹	-	30-800	30–800	Hz
Power handling capacity ² (AES)	-	750	750	W
Max Sound Pressure Level ³	SPL _{max}	122	122	dB SPL
Min. impedance modulus	Z _{min}	7.2 @ 200Hz	5.9 @ 210Hz	Ω
Voice-coil inductance ⁴ @ 1 kHz	L _{e1k}	1.72	1.56	μH
@ 10 kHz	L _{e10k}	0.81	0.74	μH
Bl product	Bl	22.7	20.6	N/A
Moving mass	M _{ms}	0.170	0.171	Kg
Thiele-Small parameters : typical (QC limits)				
Resonance frequency ⁵	F _s	33 (±5)	33 (±5)	Hz
DC resistance ⁶	R _e	5.6 (±0.5)	4.6 (±0.5)	Ω
Mechanical quality factor	Q _{ms}	4.0	4.4	1
Electrical quality factor	Q _{es}	0.38	0.38	1
Total quality factor	Q _{ts}	0.35	0.35	1
Mechanical suspension compliance	C _{ms}	135	135	10 ⁻⁶ m/N
Effective piston area	S _d	0.128	0.128	m ²
Equivalent C _{as} air load	V _{as}	0.315	0.315	m ³
Max. linear excursion	X _{max}	8.0	8.0	mm
Linear displacement volume	V _d	1.024	1.024	10 ⁻³ m ³
Half-space efficiency		2.9	2.8	%
Unity load volume	V _{as} · Q _{ts} ²	39.1	39.1	m ³
Absolute maximum ratings				
Short term max. input voltage ⁷	V _{max}	160	135	V
Max. excursion before damage	X _{dam}	16	16	mm
Ambient operating temperature		– 10 to + 50°C		
Storage temperature ⁸		– 20 to + 70°C		
Environmental conditions		Indoor		
Application information				
Air volume occupied by the driver ⁹		6.9	6.9	10 ⁻³ m ³
Speaker net mass		10.9	10.9	Kg
Recommended reflex box	V _b /F _b	250L/35Hz		10 ⁻³ m ³ /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 / IEC 268-5 Standards, using a 150 liter Bass-Reflex test enclosure tuned at 40Hz.
- 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 : Calculated for front mounting on to a 18 mm thick board.



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Models **7510** 8 Ω
7560 4 Ω

B46

Professional Series

18" Bass Extended Drivers High Efficiency High Sounding Quality

APPLICATIONS

Dedicated to Sub-Bass applications when high power handling is not specified, these drivers are able to cover a wide frequency band, ranging from 30Hz to 500Hz with remarkable sonic properties (even considering directivity pattern) that allow them to be used in a three-way Sound Reinforcement system as well as in a specific Sub system of medium input power.

The recommended enclosure is a Reflex type with volume ranging from 200L to 250L tuned from 38Hz to 40 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 capacity **500 W AES**
 Reference efficiency (1W @ 1m) **98 dB SPL**
 SPL max (continuous) **121dB SPL**
 Usable frequency range **30-1200 Hz**
 Environmental withstanding **Indoor**

ARCHITECTURAL SPECIFICATIONS

Nominal diameter : 460 mm.

Frame : Aluminum 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 impregnated and front-coated with damped resins, fitted with central carbon-fiber dome and double roll, treated and damped fabric surround.

Speaker mass : 9.10 kg.

B46 Series

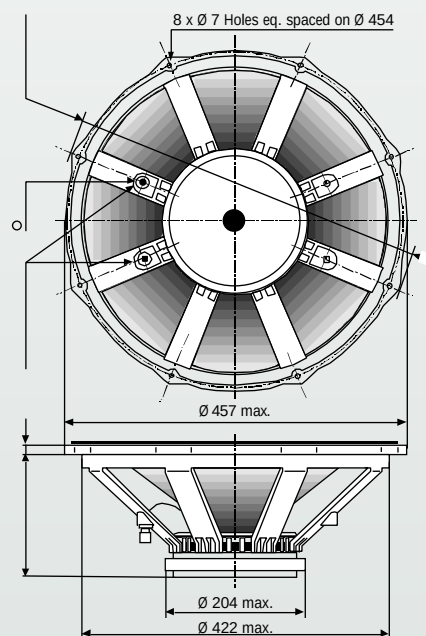
Models 7510 n 7560

18" Bass Extended Drivers

SPECIFICATIONS

Model		7510	7560	
Typical characteristics				
Rated impedance	Z	8	4	Ω
Reference efficiency (1 W@1 m)	-	98	98	dB SPL
Usable frequency range ¹	-	30-1200	30–1200	Hz
Power handling capacity ² (AES)	-	500	500	W
Max Sound Pressure Level ³	SPL _{max}	121	121	dB SPL
Min. impedance modulus	Z _{min}	6.2 @ 220Hz	3.2 @ 230Hz	Ω
Voice-coil inductance ⁴ @ 1 kHz	L _{e1k}	1.47	0.73	μH
@ 10 kHz	L _{e10k}	0.62	0.31	μH
Bl product	Bl	23.4	16.4	N/A
Moving mass	M _{ms}	0.157	0.157	Kg
Thiele-Small parameters : typical (QC limits)				
Resonance frequency ⁵	F _s	36 (±6)	36 (±5)	Hz
DC resistance ⁶	R _e	5.6 (±0.5)	5.6 (±0.5)	Ω
Mechanical quality factor	Q _{ms}	3.6	3.6	1
Electrical quality factor	Q _{es}	0.36	0.40	1
Total quality factor	Q _{ts}	0.33	0.37	1
Mechanical suspension compliance	C _{ms}	124	124	10 ⁻⁶ m/N
Effective piston area	S _d	0.128	0.128	m ²
Equivalent C _{as} air load	V _{as}	0.286	0.286	m ³
Max. linear excursion	X _{max}	7.0	7.0	mm
Linear displacement volume	V _d	0.896	0.896	10 ⁻³ m ³
Half-space efficiency		3.6	3.3	%
Unity load volume	V _{as} · Q _{ts} ²	31.1	39.4	m ³
Absolute maximum ratings				
Short term max. input voltage ⁷	V _{max}	125	90	V
Max. excursion before damage	X _{dam}	16	16	mm
Ambient operating temperature		– 10 to + 50°C		
Storage temperature ⁸		– 20 to + 70°C		
Environmental conditions		Indoor		
Application information				
Air volume occupied by the driver ⁹		6.2	6.2	10 ⁻³ m ³
Speaker net mass		9.1	9.1	Kg
Recommended reflex box	V _b /F _b	200L/40Hz	250/38Hz	10 ⁻³ m ³ /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 / IEC 268-5 Standards, using a 150 liter Bass-Reflex test enclosure tuned at 40Hz.
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- 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 : Calculated for front mounting on to a 18 mm thick board.



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