

Features

- **EXTENDED POLE** - Reduces distortion by making the magnetic field more symmetrical.
- **VENTED POLE** - Relieves air pressure under the dust cap for reduced dynamic compression, and provides better voice coil cooling for higher power handling capacity.
- **DUAL PLASTIC FIBER SPIDER** - Keeps voice coil centered with long excursions.
- **DOUBLE COATED CONE** - The Kraft pulp cone is stiffened by a coating that is applied to both sides of the cone and lowers the distortion caused by flexing.
- **BUMPED BACKPLATE** - Eliminates voice coil hard bottoming.
- **RUBBER SURROUNDS** - Rubber Surrounds have the highest compliance for greater excursion without non-linearity, and very good environmental resistance.
- **SOFT CLIP DESIGN** - Avoids bottoming, voice coil hitting the backplate or the spider hitting the top plate, which causes the popping noise heard at extreme volumes.
- **CAST ALUMINUM FRAME** - Provides increased strength and heatsink capabilities..
- **PRECISION OFC FLAT WIRE VOICE COIL BOBBIN** - This construction technique yields not only a much physically stronger coil assembly, but also improves manufacturing consistency.
- **VENTED BRASS VOICE COIL BOBBIN** - Brass offers a high heat capacity and dissipation characteristics with less distortion and more mechanical strength than aluminum. The vent holes also allow for better heat circulation and dissipation.

Specifications

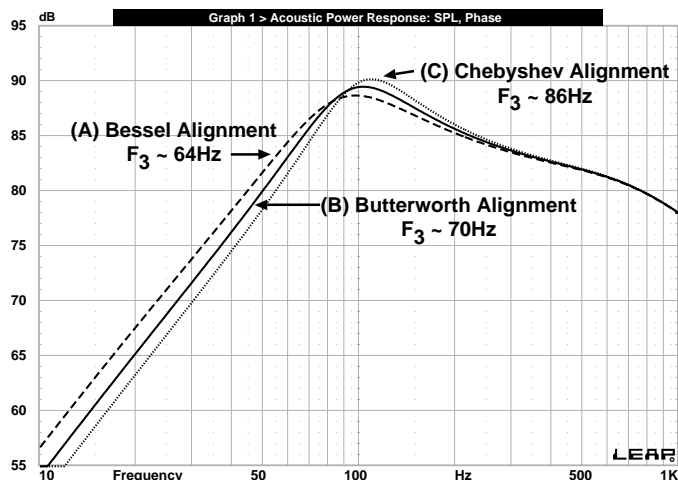
Power Handling Capacity 200W RMS
 Recommended Amplifier Output Up to 200W RMS
 Frequency Response F_s-3.0kHz.
 Sensitivity 88dB (1W/m)
 Impedance 4ohms
 DC Coil Resistance (R_e) 4.0 ohms
 Free Air Resonance (F_s) 30Hz.
 Equivalent Suspension Stiffness (V_{as}) 2.22cu.ft.(63.0 liters)
 Mechanical Q (Q_{ms}) 4.14
 Electrical Q (Q_{es}) 0.33
 Total Q (Q_{ts})030

Excursion (X_{linear}) 4.1mm
 Cone Area (S_d) 356sq.cm.
 Diaphragm Material Epoxy-coated Non-pressed Pulp
 Surround Material Rubber
 Magnet Material,Weight Strontium Ferrite
 38oz.(1.08kg.)
 Voice Coil Diameter 2.0 in.
 Driver Physical Volume 164.7 cu.in.(2.7 liters)
 Mounting Depth (drop-in) 4-16/16 in.(110 mm.)
 Cutout Diameter (Front mount) 9-1/8in (232 mm)
 Driver Weight 3.8kg. (7lb. 8oz.)

SWR-254A

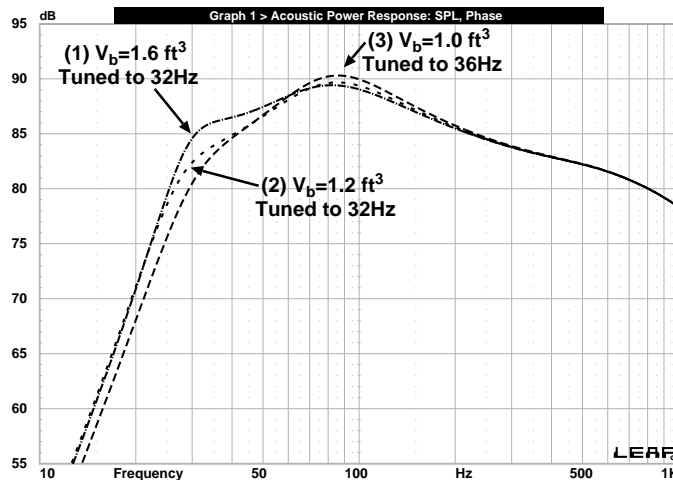
10" BASS 200 4Ω Woofer

Sealed Enclosures



	Box Volume	Alignment	Qtc	Sound
A	0.6 cu. ft.	Bessel	0.505	Tight
B	0.5 cu. ft.	Butterworth	0.707	Neutral
C	0.3 cu. ft.	Near Chebyshev	0.89	Boomy

Vented Enclosures

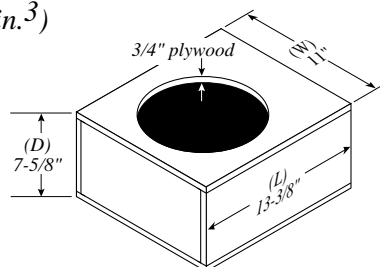


	Box Volume and Port Sizes	Sound
1	1.6 cubic feet, ported at Fb=32 Hz (1) 3" x 6-1/2" Port	Most Low Bass
2	1.2 cubic feet, ported at Fb=32 Hz (1) 3" x 9-1/3" Port	—
3	1.0 cubic feet, ported at Fb=36 Hz (1) 3" x 11-5/8" Port	Smallest Vented Enclosure

Note: You should use the largest port area possible.

Use these dimensions for examples only.

(Butterworth Alignment)
Optimum Sealed
Enclosure: (Unfilled)
Interior Vol. =
 0.5 ft.^3
(864 in.³)



GOLDEN RATIOS

$$\sqrt[3]{(\text{Volume})} = a$$

$$L = 1.25 \times (a)$$

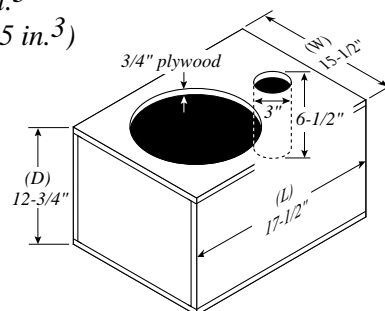
$$W = 1.00 \times (a)$$

$$D = 0.80 \times (a)$$

NOTE: Driver should always be mounted off center to minimize standing waves.

NOTE: Measurements are for Outside Dimensions"

Optimum Vented
Enclosure:
Interior Vol. =
 1.6 ft.^3
(2765 in.³)



Filled Enclosure: In sealed boxes it is recommended to fill with acoustic fiberglass or Dacron batting in order to minimize standing waves inside the box. Filling increases enclosure volume by about 20%. Therefore it is necessary to reduce the enclosure volume by 20% (dividing by 1.2) when selecting a box.

Qtc: The total Q of the closed box system. A Qtc of .707 yields a flat shoulder response.

f3: This is the cutoff frequency; the frequency at which the radiated power is half (-3dB) of what it is at midband.

Vented Enclosure: It is recommended to line the interior walls with 1/2" to 1" fiberglass sheeting or polyester batting. This will greatly reduce standing waves in the enclosure. Loose filling in a vented enclosure is not recommended as it can impede air flow through the vent.

Fb: Resonant tuning frequency of the enclosure.