# **ENCLOSURE RECOMMENDATIONS**

## DAMPING MATERIAL

### **Optimum Sealed Volume**

Internal volume: .88ft3 / 24.92L

Enclosure "Q": .71 -3dB response: 45Hz Efficiency: 87dB

Maximum power handling: 250 watts





13.3"

12.5"

Cu. feet/liters	"Q"	-3dB	Efficiency	PE
small sealed volume: .4/11.33	.95	50Hz	87dB	250 watts
large sealed volume: 1.47/41.63	.6	46Hz	86dB	250 watts

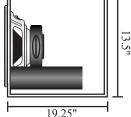
**Optimum Vented Volume** 

Internal volume: 1.55ft3 / 43.89L

Tuning frequency: 30Hz Port (D x L): 4" x 21"\*\*\* -3dB response: 28Hz Efficiency: 87dB

Maximum power handling: 250 watts





Cu. feet/liters	Tune to	Port	-3dB	Efficiency	PE
small vented volume: 1.2/33.98	34Hz	4" x 21"***	32Hz	87dB	250 watts
large vented volume: 2.0/56.63	25.3Hz	3" x 12.3"	25Hz	86.3dB	250 watts

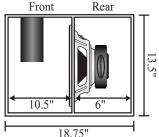
## **Optimum Bandpass Volume**

Front volume: .87ft3 / 24.64L Rear volume: .45ft3 / 12.74L Tuning frequency: 64Hz Port (D x L): 5" x 10.5"\*\*\* -3dB response: 48 - 84.6Hz

Efficiency: 90.8dB

Maximum power handling: 250 watts





Front cu. ft/liters	Rear cu.ft/liters	Tune to	Port	-3dB	Efficiency	PE
.68/19.26	.8/22.65	54.8Hz	5"x21.6"***	38 – 77Hz	88dB	225 watts
.77/21.8	.73/20.71	60.9Hz	5"x14.25"***	46 – 78Hz	87.7dB	250 watts

<sup>\*</sup>Note: Dimensions given require the use of 0.75" (19mm) board.

The most common damping materials used are Dacron and Polyfill. Reclaimed fiber underlay has been discovered to be an excellent substitute especially when glued directly to the walls of the enclosure. Fiberglass may be used, but please limit usage to sealed enclosures only. When used in vented/bandpass enclosures, fiberglass fibers escaping through the port may be hazardous to your health.

SEALED ENCLOSURE VENTED ENCLOSURE BANDPASS (sealed chamber) BANDPASS (vented chamber) DACRON/POLYFILL loosely fill the enclosure line 3-5 walls line 3 walls line 1 wall (optional)

**UNDERLAY** FIBERGLASS line 5 walls line 5 walls

line 1-3 wall Please limit the use of line 1-3 wall fiberglass to sealed line 1 wall (optional) enclosures only

### ONS

Model	DBW10D	
Driver description	10" Subwoofer, Dual Voice Coil	
Mounting depth, in./mm	4.625/117.54	
Cutout dimensions, in./mm	9.1/231.26	
Impedance	4 ohms per coil	
Nominal power handling	175 watts	
Maximum power handling (PE)	250 watts	
Dynamic power handling	800 watts	
Voice coil – size	2", 4 layer	
Magnet weight	38 oz.	
Frequency response	22Hz to 500Hz	
Resonance frequency (fs)	24Hz	
QTS	.401	
QMS	10.315	
QES	.416	
VAS, ft./liter	2.23/63.27	
X-max, in./mm	.315/8	
Efficiency (2.83V/1M)	86.37dB	

### **POWER RATINGS**

Rating the power handling of subwoofers is not a difficult task. However, understanding power ratings is often confusing. Many times the Maximum Power Ratings are viewed as the RMS power handling of the driver, when in actuality Maximum is generally the break point of the driver. This has lead Crossfire to come up with a system to rating the power necessary to drive our subwoofers. Please read the following cautiously before choosing your amplifier.

#### Nominal power handling

-Nominal power handling is the power rating given by Crossfire at which the subwoofer will experience minimal mechanical degradation over time when using a recommended enclosure. In other words, this is the recommended power to be used per woofer to assure long life.

#### Maximum power handling (PE)

-Maximum power handling is the power rating given by Crossfire at which the subwoofer could experience a high amount of mechanical degradation that may lead to possible failure over time when using a recommended enclosure. In other words, do not exceed this power level for extended periods of time.

#### Dynamic power handling

Dynamic power handling is the power rating given by Crossfire for peak transients and short bursts. Continuous playing at or above this level will cause mechanical failure and/or thermal failure. In other words, this power level should never be attained with the exceptions of approved SPL competition vehicles. This could possibly void your warranty.

<sup>\*\*</sup>Be sure to add in .050ft3 / 1.42L for driver displacement in all "Other" enclosures.

<sup>\*\*\*</sup>WARNING: Due to long port length, slot porting will most likely be needed. Tube ports are for illustration purposes only