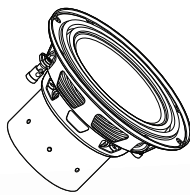


8 SUB

8-INCH SUBWOOFER



RAVEN
DESIGN STUDIO



MOUNTING DEPTH

The Raven 8 Sub mounting depth is only 124.5 mm (4.902 in) with no rear vents so that the enclosure can be as shallow and compact as possible, even allowing contact inside the enclosure between the rear of the magnet and the back wall.

VERSATILITY AND DURABILITY

All metal surfaces have a special multi-coat treatment for salt water protection. While we do not claim "marine grade", all Raven Design Studio speakers and drivers are designed, engineered and finished to withstand any environment. They can safely be used in cars, bikes, boats, ATVs, planes, homes. All seasons. All terrains. We consider this a minimum requirement.

OPTIONAL GRILLE

Compatible grilles are available separately for purchase.

KEY FEATURES

DESIGN GOALS

The primary design goal for the Raven Sub line was to allow the deepest reach and the lowest distortion for best bass in the smallest possible sealed enclosure. Additionally, the overall depth of the driver was configured in order to fit under seat enclosures.

RIGID INVERTED DOME

The extremely rigid inverted cone/dome is made of carbon fiber and fiberglass with high mass to achieve a low resonance frequency in a small enclosure. To assure the integrity of the cone/dome under high pressure of deep Xmax in a very small enclosure, the absolute best solution was carbon fibers flattened to extreme thinness and interwoven, creating the Raven signature line checkerboard pattern.

SURROUND AND SPIDER

The three roll rubber surround and spider are FEA optimized for maximum excursion and minimum distortion in this specific application.

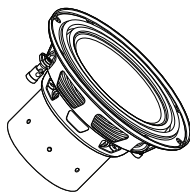
ORIGINAL MOTOR STRUCTURE

The proprietary FEA optimized original motor structure is designed to be continuously linear. Magnetic flux in the gap is constant and symmetric. The inductance is minimized and symmetric over its range. The magnet is also designed for optimized voice coil cooling to withstand high power and high excursion.



8 SUB

8-INCH SUBWOOFER

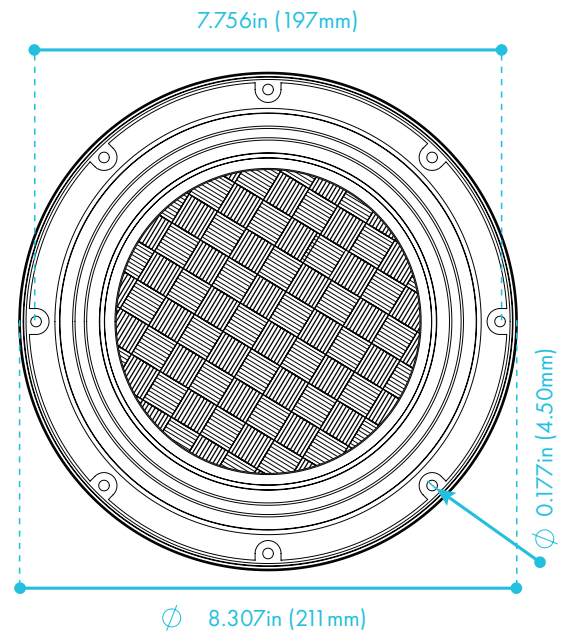


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TECHNICAL DATA

RECOMMENDED XOVER POINT	75 Hz - 1000 Hz
RECOMMENDED XOVER SLOPE	12 dB/oct or higher
ALTERNATIVE XOVER SLOPE	18 dB/oct , 24 dB/oct
NOMINAL POWER HANDLING	600 W
PEAK POWER	1200 W
SENSITIVITY 2.83 V / M	84.6 dB
EFFICIENCY 1 W / 1 M / 2 OHM	78 dB
NOMINAL IMPEDANCE	2 Ohm
DC RESISTANCE	1.7 Ohm
VOICE COIL DIAMETER	76 mm (3 inch)
FORMER MATERIAL	Aluminum
VOICE COIL WIRE	Copper
VOICE COIL WINDING	4 layers single voice coil
INDUCTANCE AT 1 KHZ	0.25 mH
SURROUND	3 rolls SBR rubber, FEA optimized for very small enclosures.
CONE MATERIAL	Proprietary layered carbon / black fiberglass, profile and composition FEA optimized.
MAGNET	High power Neodymium optimized by FEA modeling
NET TOTAL WEIGHT	4.3 kg (9.3 lb)

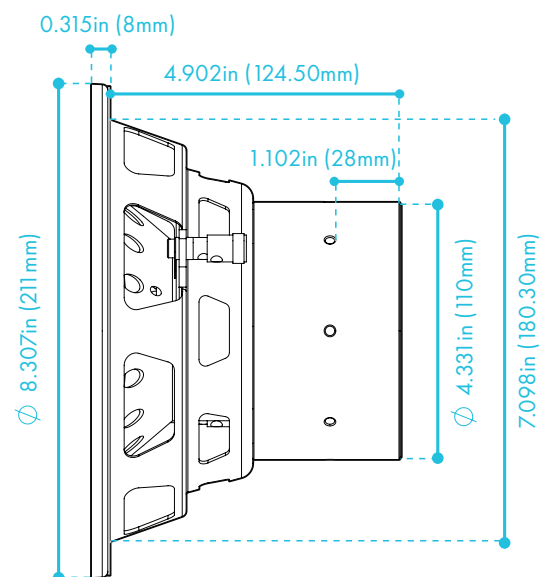
FACE



THIELE-SMALL PARAMETERS

IMPEDANCE	2 Ohm single voice coil	LE	0.25 mH at 1 kHz
RE	1.7 Ohm	BL	10.76 N/A
FS	28 Hz	MMS	200 grams
QTS	0.44	CMS	0.16 mm/N
QMS	3.54	XMAX	+/- 20 mm
QES	0.5	SPEAKER VOLUME	0.7 L (0.025 CuFt)
VAS	9 L (0.32 CuFt)	DISPLACEMENT	
SD	210 cm ²		

SIDE PROFILE



ENCLOSURE SPECIFICATIONS

SEALED ENCLOSURE:

MINIMUM	12 L (0.08 CuFt), -3 dB at 56 Hz
BEST	6 L (0.21 CuFt), -3 dB at 44 Hz

POWER TO REACH +/- 20 MM XMAX 600 watts

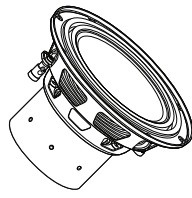
VENTED ENCLOSURE:

OPTIMUM	14 L (0.5 CuFt) -3 dB at 28 Hz
PORT TUNING	30 Hz
PORT DIAMETER	63.5mm (2.5 in) diameter
PORT LENGTH	660mm (26 in)

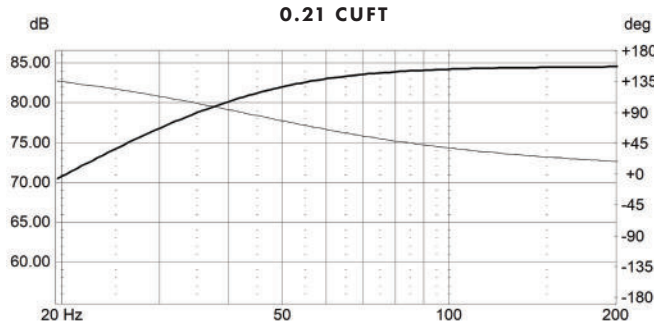
RECOMMENDED High Pass filter: 25 Hz @ 12 dB/oct
MAXIMUM POWER 1200 watts

8 SUB

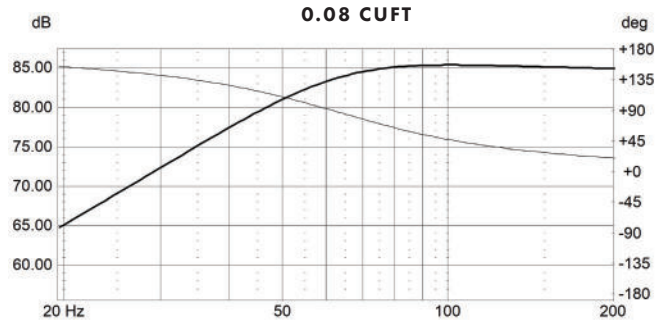
8-INCH SUBWOOFER



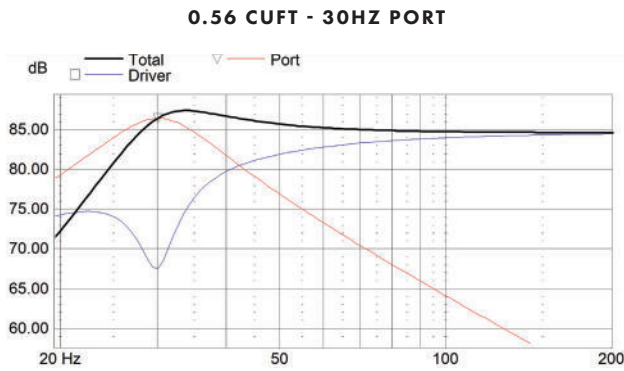
SEALED ENCLOSURE (BEST)



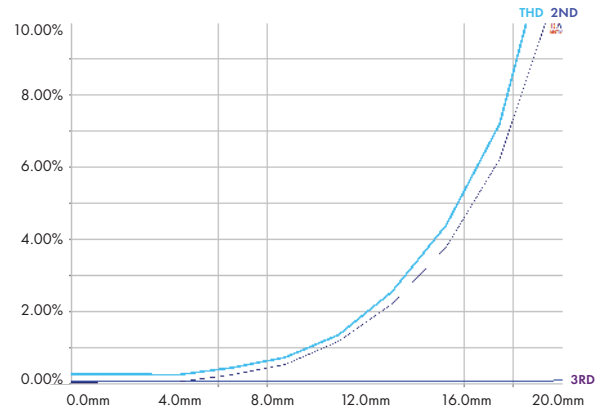
SEALED ENCLOSURE (MINIMUM)



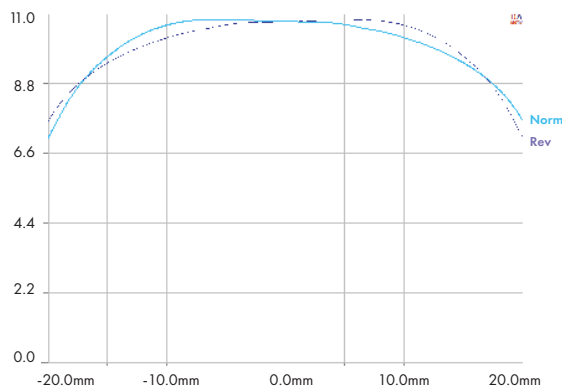
VENTED ENCLOSURE



THD VS EXCURSION



BL VS EXCURSION



INDUCTANCE VS FREQUENCY VS EXCURSION

