



## XLS SERIES

the extreme subwoofer. maximum performance in any application

By introducing the new Extra Long Stroke (XLS) series, Peerless has pushed the performance limits for subwoofers' in SPL and SQ audiophile applications. With an immense stroke and massive power handling XLS subwoofers will fulfill every demand for deep clean and impressively fast bass reproduction at any volume level.

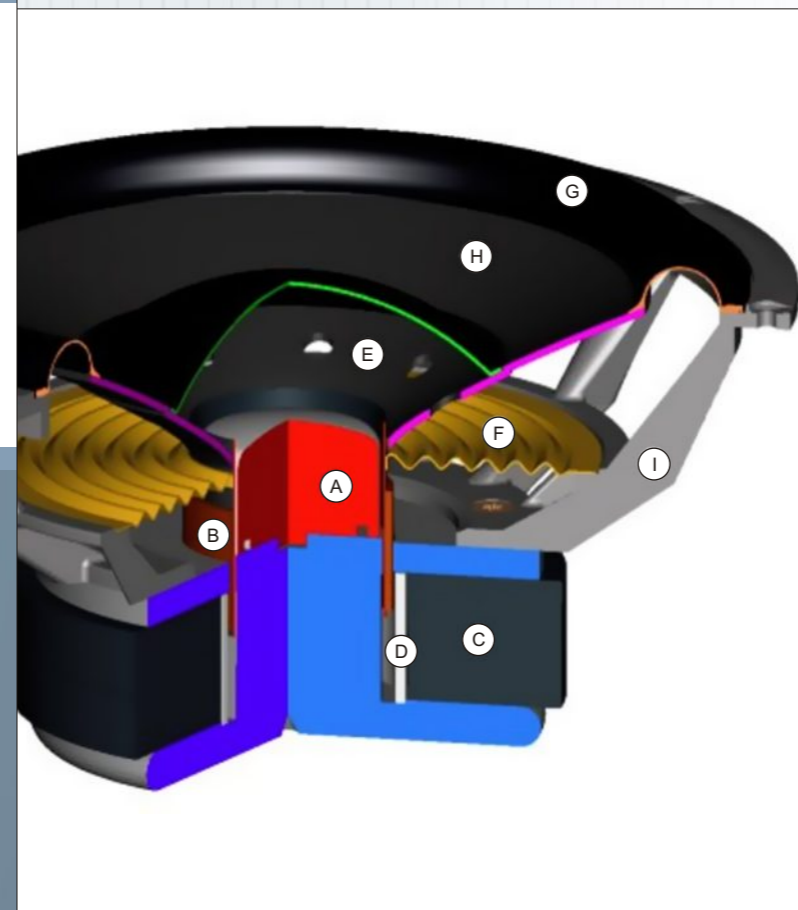
Aerodynamic, rigid, cast aluminium basket with a high-tech Nomex® long throw spider supports a free and open ventilated 2" aluminum, quadruple wound voice coil with shorting ring, giving an impressive 44mm excursion thru a massive 2.4Kg high flux dual magnet system.

Premium grade materials, low resonance design and specially compounded strong rubber surround makes the XLS subwoofer capable of working in enclosures as small as 16 liters.

As used in many award winning SPL and SQ vehicles in Europe.

	Single Voice Coil		Dual Voice Coil	
Model	830514	830515	830563	830564
Size	10 Inch	12 Inch	10 Inch	12 Inch
Fs(Hz)	39.4	28.2	33.9	48.8
Qts	0.39	0.30	0.38	0.61
Vas	21.4	80.5	25.6	20.4
Sensitivity	92.2dB	93.5dB	91.4dB	93.7
Rec. Amp Power	100-500W	100-500W	200-1000W	200-1000W
Magnet Weight	2.4Kg	2.4Kg	2.4Kg	2.4Kg
Magnet Diameter	147mm	147mm	147mm	147mm
Impedance	4 Ohm	4 Ohm	2 Ohm	2 Ohm

## xls series - engineering notes



### A. Aluminum Spacer

The aluminum spacer serves as heat sink for the coil to reduce power compression.

### B. Black Anodized Voice Coil

The 2-inch 4-layer voice coil is wound on thick black anodized aluminum for improved heat dissipation and power handling.

### C. Stacked Magnet System

The twin stacked magnetic system is optimized by FEA (Finite Element Analysis), to create a symmetric powerful magnetic field in the air gap, and provide space for the 44 mm max excursion of the voice coil.

### D. Distortion Reduced Motor

A long 4 layer voice coil normally results in high self induction and impedance varying with excursion. Its many ampere turns react on the magnetic field in the air gap. These two main factors causing motor distortion in subwoofers are practically eliminated by the combined impact of the Aluminum Short Circuiting Ring (D) and the Aluminum Spacer (A) on the pole piece. At the same time they both contribute as heat sinks for the voice coil, reducing power compression. The result is unbelievable clean bass reproduction.

### E. Vented Cone

To eliminate compression under the dust cap the cone is vented by 8 large holes. This way the coil is cooled and there is no compression or velocity noise.

### F. Nomex® Spider

The spider is made of high tech Nomex® material. This material is chosen for its high rigidity and long term stability. The suspension will stay in shape for a very long time under heavy load.

### G. Rubber Surround

The surround is made from SBR rubber because of the wide operating temperature, low creep and long term reliability.

### H. Fiber Composite Cone

The cone is molded from a propriety air dried wood free pulp with a blend of Nomex®, Kevlar® and glass fibers bonded together by deep impregnation with polymers. This creates an ultra stiff and relatively light cone that will stay stable even under very large sound pressures.

### I. Rigid Cast Aluminum Basket

The rigid cast basket with an aerodynamic profile provides the necessary sturdy base for the magnet structure and suspension and allows for the 44 mm max excursion of the cone. The spider is ventilated to achieve the lowest possible compression and allow air to flow freely to create a cooling effect for the voice coil