



DEPARTMENT OF

MECHANICAL ENGINEERING

geometry series

The Geometry Series pays homage to the importance of geometry in all good design. With the Geometry Series Wilson Benesch applies these principles, with passion, to acoustic engineering.

Whether it be the curves in a musical instrument, a large auditorium or an aircraft, geometry is the fundamental language of good design. The Greeks, who defined the rules of geometry, applied their geometric forms to Architecture. Curved amphitheatres allowed public discussion long before any loudspeaker.

The Geometry Series aspires to be the evolutionary development of the time tested Odyssey Series that is now in its tenth year. This collection provides the summation of many years of considered thought and re-evaluation, encouraged in part, by new technologies and new manufacturing capabilities.



Vertex

The Vertex is a 2-way highly optimised advanced materials technology stand mounted loudspeaker. Unlike many stand mounted designs, the Vertex and its stand, work in harmony to attain structural integrity, vital to the control of key components. Mounted with high tensile bolts, the speaker and stand become one. The cleverly engineered Vertex conceals and protects both the wire and crossover elements within the stand, avoiding all the problems associated with conductor and filter resonance, whilst also providing shielding.

The advanced carbon fiber A.C.T. monocoque, requires no additional bracing. Each element has been carefully selected and developed by Wilson Benesch, once bonded, each adjacent high performance element results in a mutual self damping. This complex hybrid construction is inaudible in a structure of this size. A unique advantage of this design, is that the air volume to cabinet size ratio is outstanding.



The high precision matching cabinets, manufactured using C.N.C tooling and advanced carbon fiber moulding techniques, are paired with powerful Wilson Benesch Tactic II drive units throughout. The Tactic II mid range drive unit is capable of remarkable transients that are never hindered by crossover parts. The control afforded by this design is limited only by the amplifier. Impedance characteristics are benign so low power amplifiers can be driven with aplomb.

The Semisphere Tweeter is the very latest innovation from Wilson Benesch. It is the result of many years of considered development that has been driven by a comprehensive critical evaluation of the finest technologies in the world, including the remarkable Sphere from Murata. The design incorporates advanced materials technologies that deliver extended high frequencies but without ever sounding un-controlled or sibilant. With moving mass components optimised to the lowest levels being driven by an ultra linear, high power, low profile motor you can be certain of outstanding transient response characteristics. Fastidious attention to detail continues at the voice coil termination, that has been reduced to a terminal free, single military specification wire connection from coil to terminal, removing any solder junctions that might compromise the micro detail, that is so essential to the function of the tweeter. The precision machined face of the tweeter designates both superb time alignment, whilst also presenting the ideal curved launch surface for the short wave lengths. The final assembly is housed within a massive housing, which weighs in at more than a kilogramme. When bolted to the polyalloy baffle and foot assembly, the whole system becomes one poly alloy, closed U beam of unyielding structural integrity.



Free of the noise commonly found in traditional loudspeaker systems the Vertex delivers a performance that is well beyond its dimensions, and is completely free of distortions that are simply unavoidable in conventional technologies. Immersed in music without distortions the listener will be drawn into the event like never before. Only the artist who composed it, and the musicians that interpreted it will be present at the event.





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Technical Specifications

Description	2 way, true linear phase, free space, ported enclosure, stand mounted monitor
Drive units	1 x 170mm (7") Wilson Benesch Tactic II Mid/Bass unit 1 x 25mm (1") Wilson Benesch Semisphere Soft dome Tweeter
Low frequency loading	Double reflex port tuning
Frequency range	-6dB at 40Hz and 35kHz -3dB at 45Hz and 25kHz
Frequency response	44Hz to 30kHz +- 2dB on axis
Sensitivity	89dB spl at 1metre on axis. 2.83V input
Impedance	6 Ohms nominal, 4 ohms minimum
Tweeter Filter	5kHz
Crossover	First order tweeter crossover Selected polypropylene capacitors and air cored inductors
Internal wiring	Hand made loom comprised of Multi stranded military specification silver plated copper with PTFE jacket soldered connections throughout
Input connections	Bi-wireable, in house machined rhodium plated copper alloy terminals
Maximum spl	118dB at 1 metre
Power handling	200W peak unclipped programme
Dimensions	Height 310mm (1050mm including stand) Width 230mm Depth 370mm
Internal volume	11.8 litres
Net weight	12kg (23kg including stand)
Finishes Available	Standard: Black, Regal Silver, Titanium Wood Satin: Natural Cherry, Maple, Oak Wood Gloss: Birds Eye Maple, Burr Walnut, Red Tulip, Red Birds Eye, Walnut, Ebonised Walnut, White Gloss



Wilson Benesch Ltd.
www.wilson-benesch.com
T: 0044 (0)114 2852656
F: 0044 (0)114 2852657
E: info@wilson-benesch.com