



VT4889 Component Transducers



The VT4889 is loaded with 9 (nine) of the world's most innovative, high-output component transducers. These advanced-technology Neodymium Differential Drive® (NDD™) components give the VT4889 the highest power-to-weight ratio of any line array speaker system in its class, in an enclosure package that reduces individual box weight by more than 30%. This weight reduction is due, in large part, to the very low weight of individual component transducers that have been developed by JBL Engineering specifically for the VERTec system. Hallmarks of these advanced components include:

- Differential Drive® Neodymium-magnet, Dual Voice Coil, Direct Cooled™ cone transducers for very low weight and extremely high output. (U.S. Patent No. 5,748,760, other U.S. and foreign patents pending).
- Industry's smallest, lightest, most powerful large-format high frequency compression driver; beryllium diaphragms (U.S. and foreign patents pending).

JBL components have historically been notably robust and exceptionally resistant to premature failure. They are also well-known for enabling the design of systems that are less resistant to power compression due to voice-coil heat buildup than those systems loaded with other loudspeaker options. The advanced components in the VT4889 carry these design criteria to new levels of performance.



2255H 380mm Low Frequency Transducer

Low frequency reproduction tasks in the VT4889 are handled by a pair of loudspeakers, housed in a vented enclosure with two ports dedicated to each woofer. The 2255H 380mm (15-inch) Differential Drive® loudspeaker weighs only 4.1kg (9.1 pounds) and packs significant low end punch, while providing a rich, full sound that makes subwoofers optional in many applications. Each VT4889 enclosure contains two 2255H drivers.



- The heat dissipation capability of the dual 76.2mm (3-inch) coil design is equivalent to that of a 152.4mm (6-inch) coil.
- A large heat sink further improves power handling.
- A rugged moving assembly provides extremely high SPL with low breakup.
- The neodymium dual coil design provides high efficiency and minimum distortion.
- 600-watt AES power rating.



2250H 200mm Cone Transducer

The VT4889 includes four midrange cone transducers. The 2205H 200mm (8-inch) Differential Drive® 300W high-powered midrange cone transducer provides significantly higher output than competitive products. Arguably the world's most powerful midrange cone speaker, the 2250's dual voice coils, neodymium magnet and massive heatsinks enable exceptional performance.



- A neodymium magnetic assembly with dual coil design for extremely high sensitivity.
- The heat dissipation capability of the dual 76.2mm (3-inch) coil design is equivalent to that of a 152.4mm (6-inch) coil.
- A massive heat sink further improves power handling while still being lighter than ceramic designs that have one-quarter the power rating.
- A copper-capped dual-gap magnetic system design produces flat power response and low distortion.
- The rugged moving assembly allows for extremely high SPL with low breakup.
- 300-watt AES power rating.



2435 Compression Driver

The VT4889 is loaded with three 2435H high frequency drivers. The 2435H is the industry's smallest, lightest and highest output large-format compression driver. At only 1.1kg (2.5 lbs) and 108mm (4.25-inches) outer diameter, it is only a fraction of the size and weight of other large-format compression drivers. The new motor structure, utilizing a two-stage phasing plug (patent-pending), is designed for maximum flux and consistent manufacture. Through the careful use of neodymium, the motor structure achieves a 20-kiloGauss flux level with extremely low weight. The 2435H achieves its high power handling through the use of ferro-fluid to wick heat away from the coil. It also utilizes a thermal connection to the heat-dissipating Waveguide for further heat removal from the driver.

The voice coil assembly is thoroughly protected by a Kapton® shield in a patent-pending configuration. This completely eliminates the possibility of outer diameter rubs which could cause premature failure. Attached to the voice-coil assembly is a dome made of beryllium, the world's lightest structural metal. The inherent stiffness of beryllium moves breakup modes typically seen at 5-6kHz to above 15Khz...an impossibility with other materials. The extremely low moving mass of the diaphragm works with the high flux density in the compact, powerful magnet to produce a driver with unparalleled transient response. Specific features include:

- Tiny high flux motor for tight clustering and maximum portability.
- A large format 76.2mm (3-inch) beryllium dome for maximum output with no breakup in the audible range.
- Patent pending "two stage" phasing plug for very high consistency.
- Patent pending "Kapton shield" voice coil assembly to protect against voice coil failure due to rubs.
- Excellent thermal management including thermal gasketing to the waveguide.
- 75-watt AES power rating.

