



The VQ 40DF (40x40), VQ 64DF (60x40) and VQ 85DF (80x50) are very high output down firing Mid/High loudspeaker systems designed for applications requiring high impact sound reinforcement with class leading pattern control.

The modular design approach allows the sound system designer to create seamless and predictable arrays, or they can be used singly as part of large distributed systems. VQ DF addresses the requirement for compact dimensions without compromising performance in any way.

VQ MH elements which are available in various patterns will integrate seamlessly with the VQ DF enclosures to facilitate tight pack arrays; the compound angles on the enclosure avoid unsightly spaces between separate cabinets when arrayed horizontally VQ MB or VS 15DR elements can be added to extend bandwidth and pattern control to lower frequencies.

The VQ DF can be configured for use in Single-Amp or Bi-Amp mode, in conjunction with a suitable digital signal processor (DSP).

Horn design involves balancing compromise.....until now.

Our unique approach in keeping what is effectively a Dual Concentric behind a single horn gives us many performance advantages. Performance of the VQ DF in terms of accuracy & sound quality is second to none. The VQ horn design principles provide definitive and measurable advantages over multiple-horn and co-axial designs.

Each VQ DF incorporates a unique driver technology to radiate a coherent single point source for superior dispersion control when coupled to a PSW™ (Point Source Waveguide). This advanced design aligns the acoustical centres of the transducers providing a single coherent wavefront emanating from the throat. The PSW™ waveguide achieves an optimum balance of extremely well controlled coverage, smooth frequency response, and natural sound character.

For outdoor applications, weather resistant enclosures which incorporate stainless steel hardware are available.

- "PSW™ Waveguide" - Point source design (Patent applied for).
- Excellent Phase Coherence
- Perfect time alignment without the associated problems of multi source interference
- Compact Dimensions
- Class leading directivity characteristics
- Extremely high sensitivity, therefore high SPL's can be achieved with a very modest amount of amplifier power
- Exceptional transient response

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## TECHNICAL SPECIFICATIONS

<b>System</b>	VQ 40DF, VQ 64DF, VQ 85DF	
<b>System Type</b>	2-Way Mid/High - Point Source	
<b>Frequency Response (-3dB) <sup>(1)</sup></b>	450Hz - 23kHz	
<b>Frequency Range (-10dB) <sup>(1)</sup></b>	350Hz - 27kHz	
<b>System Sensitivity (1W @1m) <sup>(2)</sup></b>		
<b>Single-Amp</b>		
VQ 40DF - Passive MF/HF (450Hz - 23kHz)	115dB (2.83V @ 8 Ohms)	
VQ 64DF - Passive MF/HF (450Hz - 23kHz)	113dB (2.83V @ 8 Ohms)	
VQ 85DF - Passive MF/HF (450Hz - 23kHz)	110dB (2.83V @ 8 Ohms)	
<b>Bi-Amp</b>		
VQ 40DF - MF (450Hz - 7kHz)	114dB (2.83V @ 8 Ohms)	
VQ 40DF - HF (7kHz - 23kHz)	112dB (2.83V @ 8 Ohms)	
VQ 64DF - MF (450Hz - 7kHz)	113dB (2.83V @ 8 Ohms)	
VQ 64DF - HF (7kHz - 23kHz)	112dB (2.83V @ 8 Ohms)	
VQ 85DF - MF (450Hz - 7kHz)	110dB (2.83V @ 8 Ohms)	
VQ 85DF - HF (7kHz - 23kHz)	109dB (2.83V @ 8 Ohms)	
<b>Dispersion H x V (-6dB)</b>		
VQ 40DF	40 x 40 degrees	
VQ 64DF	60 x 40 degrees	
VQ 85DF	80 x 50 degrees	
<b>Driver Complement</b>		
MF/HF	Dual Concentric™ Compression driver loaded into a single PSW™ Waveguide	
<b>Crossover</b>		
Single Amp	400Hz (Highpass) 7kHz (passive)	
Bi Amp	400Hz (Highpass) 7kHz (active)	
<b>Directivity Factor (Q) averaged 1kHz to 10kHz</b>	32.1(VQ 40DF), 23.5(VQ 64DF), 12.4(VQ 85DF)	
<b>Directivity Index (DI) averaged 1kHz to 10kHz</b>	15.1(VQ 40DF), 13.7(VQ 64DF), 10.9(VQ 85DF)	
<b>Rated Maximum SPL <sup>(2)</sup></b>	Average	Peak
VQ 40DF MF	137dB	143dB
VQ 40DF HF	135dB	141dB
VQ 40DF Passive MF/HF	137dB	143dB
VQ 64DF MF	136dB	142dB
VQ 64DF HF	132dB	139dB
VQ 64DF Passive MF/HF	136dB	142dB
VQ 85DF MF	133dB	139dB
VQ 85DF HF	132dB	138dB
VQ 85DF Passive MF/HF	133dB	139dB
<b>Power Handling <sup>(3)</sup></b>	Average	Programme
MF @ 8 Ohms	200W (40V)	400W
HF @ 8 Ohms	90W (27V)	180W
Passive MF/HF @ 8 Ohms	200W (40V)	400W

### Recommended Amplifier Power

Mid Frequency	400W into 8 Ohms
High Frequency	200W into 8 Ohms
Passive MF/HF	400W into 8 Ohms

### Nominal Impedance

Mid Frequency	8 Ohms (7.0 Ohms Minimum)
High Frequency	8 Ohms (8.7 Ohms Minimum)

### Enclosure

18mm (0.71") birch plywood. Vented and internally braced.

### Grille

Powder coated perforated steel grille. Stainless steel on weatherproof version.

### Finish

Black or white textured paint (custom colours on request)

### Connectors

Barrier Strip and Neutrik NL4

### Fittings

2 x Recessed carrying handles  
9 x M10 flying inserts

### Dimensions

460mm x 694mm x 497mm  
(18.11" x 27.32" x 19.57")

### NET Weight

TBC

### Notes:

- (1) Average over stated bandwidth. Measured at 3 metres on axis, then referred to 1 metre
- (2) Unweighted pink noise input, measured at 3 metres in an anechoic chamber, then referred to 1 metre
- (3) Accelerated Life Test (EIA RS426-B)

A full range of measurements, performance data, CLF and Ease™ Data can be downloaded from [www.tannoy.com](http://www.tannoy.com)

Full independent verification of published specifications carried out by NWAALabs, California can also be obtained from the downloads section of [www.tannoy.com](http://www.tannoy.com)

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods will always equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
TBC	VQ 40DF	BLACK	1
TBC	VQ 64DF	BLACK	1
TBC	VQ 85DF	BLACK	1

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