



## Product Description

The POWERV12 uses a high power handling 300mm (12.00") version of Tannoy's exclusive point source, constant directivity Dual Concentric™ drive unit technology. The robust chassis construction, an LF cone of reinforced paper terminated with a twin roll cambric surround and a 25mm (1.00") titanium domed, neodymium magnet equipped HF all contribute high power output with high sensitivity. With the HF mounted in the throat of the LF driver these two sources are coincidentally aligned into a single point source. This is a configuration, exclusive to the Dual, delivers a smooth and uniform frequency response over a wide area. The CAD designed Tulip WaveGuide™ combines 90 degrees conical dispersion for optimum coverage, forward gain and excellent acoustic impedance characteristics.

Delivering impressive levels of accuracy and performance, the POWERV12 is equipped with a highly efficient, flexible and reliable Class D power amplifier incorporating a switching power supply. The amplifier section and power supply were developed simultaneously and therefore optimally matched to minimise noise and enhance stability. The power module combines light, efficient and cool-running amplification, comprehensive driver protection and equalisation into a single compact unit. Clean, undistorted sound is delivered, even when driven at very high power levels. No cooling fans are required so the system runs quietly and is not prone to internal dust contamination.

The POWERV12 capitalises on the integrated design concept as every component part and their interaction is fully optimised. All signal processing functions have been precisely tailored; crossover frequencies and slopes, EQ, phase corrections and limiting. LED's on the rear panel indicate signal presence, signal activity, and power. Signal input and audio link are via XLR, while the mains connector is a Neutrik locking Powercon type.

A switch on the rear panel of the full range models allows selection between Full Range or High Pass modes, with High Pass allowing a speaker to be mounted in close proximity to a boundary or simply to increase headroom. High pass mode also enables a simple top box and subwoofer combination to be created without the need for an external crossover. Two low pass setting options on the subwoofer amplifiers fully optimise integration with the full range units.

The POWERV12 is a high performance live sound reinforcement, high quality public address or large scale music reinforcement loudspeaker. This versatile powered speaker also has, due to effective acoustic matching to the other POWERV models, a wide range of uses in fully integrated installations as diverse as nightclub infill, theme bars, performing arts centres, high quality public address, theme parks, leisure venues, audio visual, houses of worship, multi use stadiums and 'dry hire' rental.

Speaker placement flexibility is enhanced by the dispersion characteristics of the Dual driver; allowing either vertical or horizontal mounting without any compromise to sound quality or acoustic performance. Used as a low profile stage monitor, the conical coverage pattern gives the performer greater freedom of movement off axis than allowed by conventional horn loaded designs.

Available in black or white, the asymmetric cabinet profile is flexible and discreet in either fixed installations or on the road.

## Features

- 300mm (12.00") Dual Concentric™ full range, point source, constant directivity drive unit type 3142
- Controlled conical dispersion for optimum coverage and forward gain
- Compact, versatile enclosures
- Rugged, highly efficient Class D amplification with universal power supply
- Integral carry handle
- Multiple flying points and accessory mounting hardware options

## Applications

- Nightclub infill
- Theme bars
- Performing arts centres
- High quality public address
- Theme parks
- Leisure venues
- Audio visual
- Houses of worship
- 'Dry hire' rental

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# POWERV12

# TANNOY®

## TECHNICAL SPECIFICATIONS

System	POWERV12	
<b>System Type</b>	Full Range – Vented	
<b>Frequency Response (-3dB) <sup>(1)</sup></b> Full Range Mode	70Hz – 25kHz	
<b>Frequency Range (-10dB) <sup>(1)</sup></b> Full Range Mode	55Hz – 38kHz	
<b>Frequency Response (-3dB) <sup>(1)</sup></b> High Pass Mode	100Hz – 30kHz	
<b>Frequency Range (-10dB) <sup>(1)</sup></b> High Pass Mode	80Hz – 38kHz	
<b>Dispersion (-6dB)</b>	90 degrees conical	
<b>Driver Complement</b>	1 × 300mm (12.00") Dual Concentric™ type 3142	
<b>Crossover</b>	Passive 1.4kHz	
<b>Directivity Factor (Q)</b>	8.2 averaged 1kHz to 10kHz	
<b>Directivity Index (DI)</b>	8.8 averaged 1kHz to 10kHz	
<b>Rated Maximum SPL <sup>(2)</sup></b>		
Average	120dB	
Peak	126dB	
<b>Distortion</b>		
<b>10% Full Power (8.9V)</b>	2nd Harmonic	3rd Harmonic
250Hz	0.56%	0.23%
1kHz	2.36%	1.88%
10kHz	2.68%	0.08%
<b>1% Full Power (2.8V)</b>	2nd Harmonic	3rd Harmonic
250Hz	0.14%	0.14%
1kHz	0.38%	0.94%
10kHz	1.03%	0.05%
<b>Crossover</b>	1.4kHz Passive	
<b>PSU Specifications</b>		
Input Connector	Locking Neutrik Powercon	
Voltage Selection	Automatic (115 / 230V, 45–65Hz)	
Switching Frequency	192kHz Synchronised to DSP	
Type	High current, high freq. switch-mode	
Efficiency	>90% typical	
Input voltage	100v / 115v / 230v nominal +/-10%	
Mains fuse	External	
Fuse type	T10AT	
Other features	Automatic soft start	

### Notes:

- (1) Average over stated bandwidth. Measured at 1 metre on axis.  
(2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber

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 NWA Labs, 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.

Construction	
<b>Enclosure</b>	37.5 litre vented and internally braced 15mm (0.62") birch plywood enclosure 15mm (0.62") MDF front baffle
<b>Finish</b>	Textured black or white paint with custom colours on request Powder coated steel grille with reticulated foam behind
<b>Connectors</b>	1 × female XLR (input) 1 × male XLR (link) 1 × Neutrik Powercon
<b>Controls &amp; Indicators</b>	Level control Power LED (Blue) Signal LED (Green) Limit LED (Red) Full range / High pass switch (110Hz) Power switch
<b>Fittings</b>	8 × M10 inserts for flying hardware 8 × M10 yoke bracket inserts 3 × recessed carrying handles (2 side & 1 rear) Blanking plate for optional VTH pole mount
<b>Dimensions</b> (H × W × D)	486 × 370 × 260mm 19.13 × 14.57 × 14.17"
<b>NET Weight</b>	23kg 50.6lbs
<b>Electronics</b>	
Maximum signal input for clip	Input attenuator at minimum: +18dBu Input attenuator at maximum: +5dBu
<b>Output noise</b>	-105dB unweighted, referenced to maximum output (22kHz bandwidth)
<b>Efficiency</b>	>90% typically
<b>Damping Factor</b>	400 ref 8 Ohms
<b>Distortion</b>	<0.05% @ 1kHz -3dB output (22kHz bandwidth)
<b>Input Impedance</b>	5.6k Ohms unbalanced 11.2k Ohms balanced
<b>Protection systems</b>	Over current Excessive over current causes shutdown Temperature Limiters applied Brownout Automatic protection & recovery Mains Inrush current limiting Indicators 1 × Limit LED 1 × Signal LED 1 × Power LED
<b>Number of channels</b>	One
<b>System Type</b>	Class D

## Ordering Information

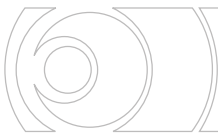
PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 4270	POWERV12	Black	1
8001 4271	POWERV12	White	1

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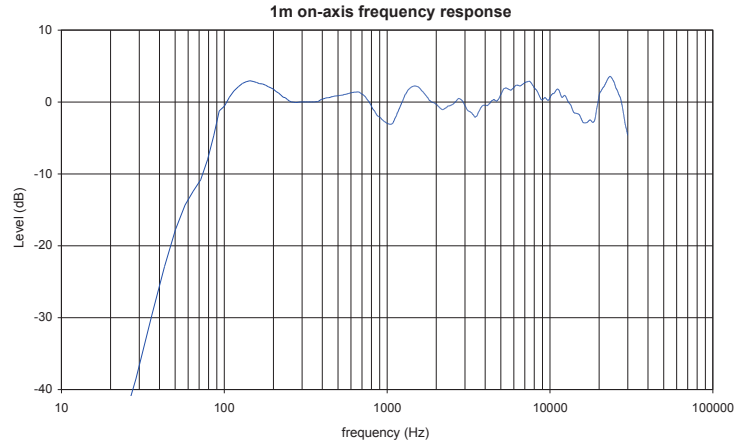
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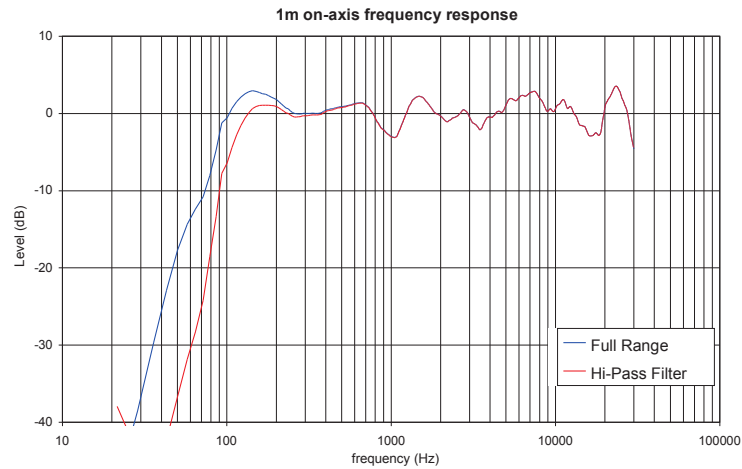
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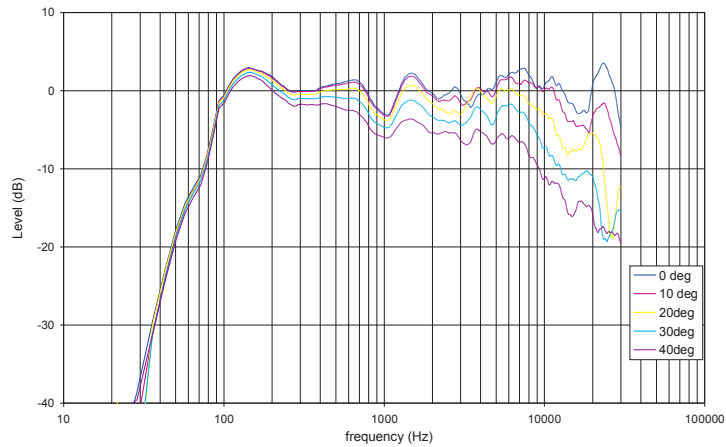
## PERFORMANCE MEASUREMENTS



ANECHOIC  
FREQUENCY  
RESPONSE



HIGH PASS FILTER ON/OFF



OFF AXIS  
RESPONSE

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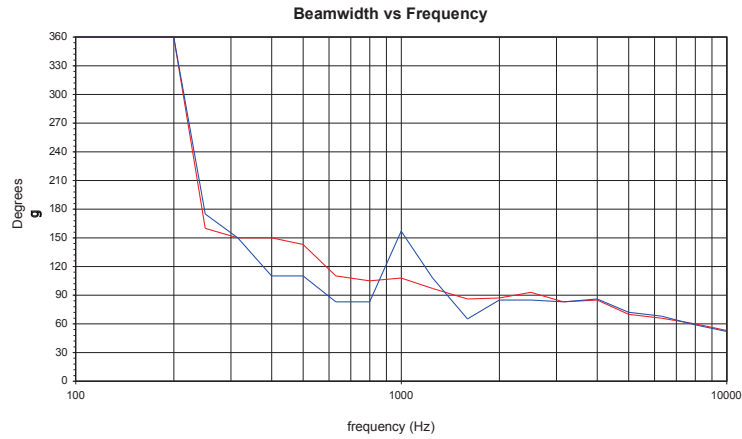
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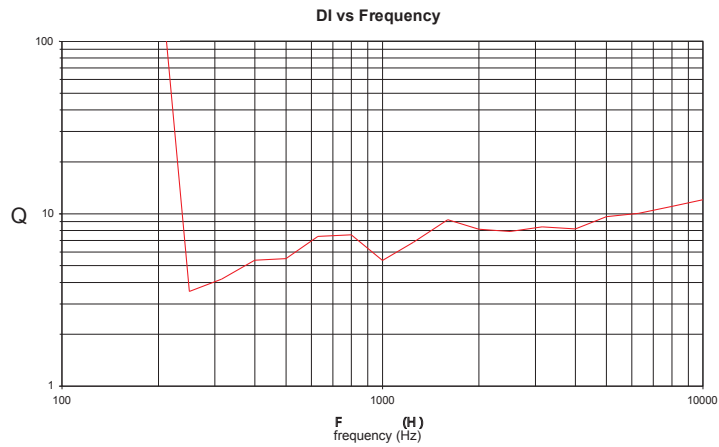
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## PERFORMANCE MEASUREMENTS



BEAMWIDTH



DIRECTIVITY INDEX

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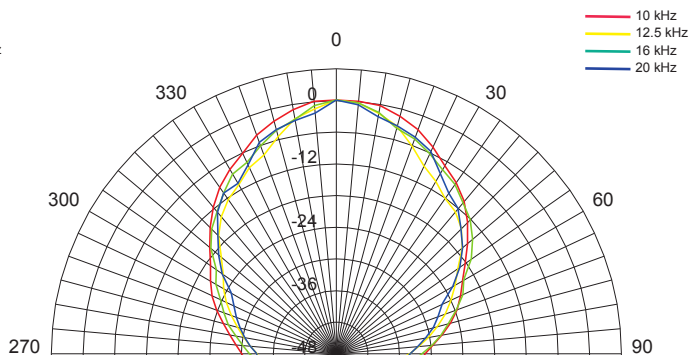
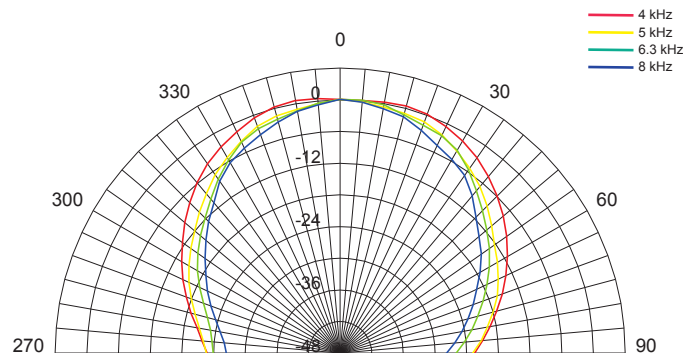
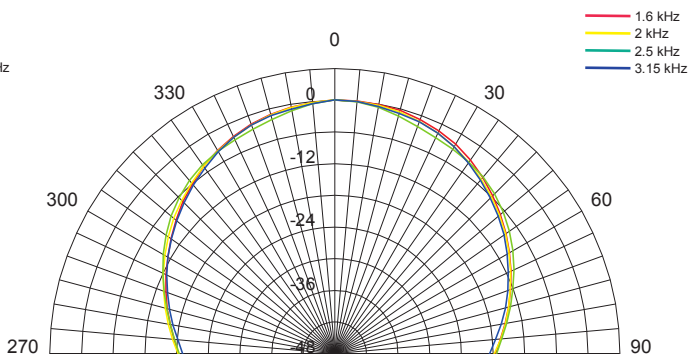
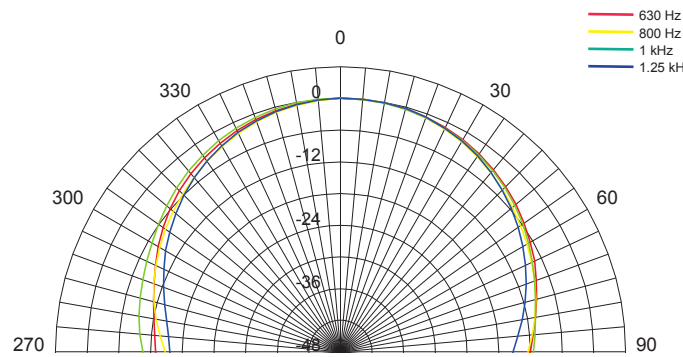
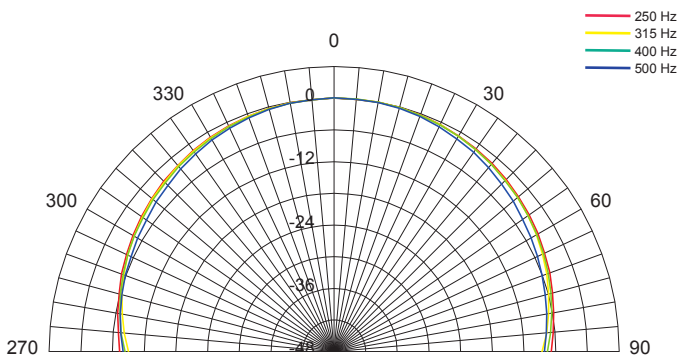
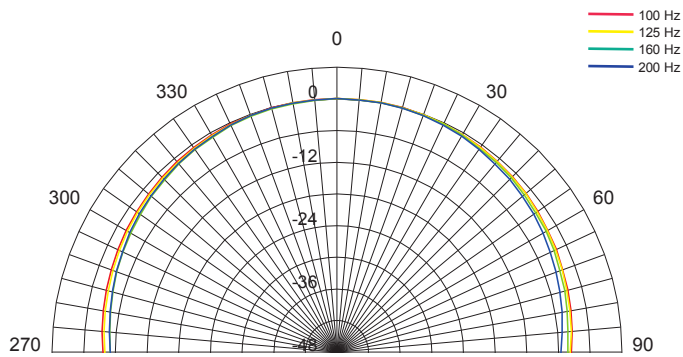
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## PERFORMANCE MEASUREMENTS POLAR PLOTS (1/3 OCTAVE)



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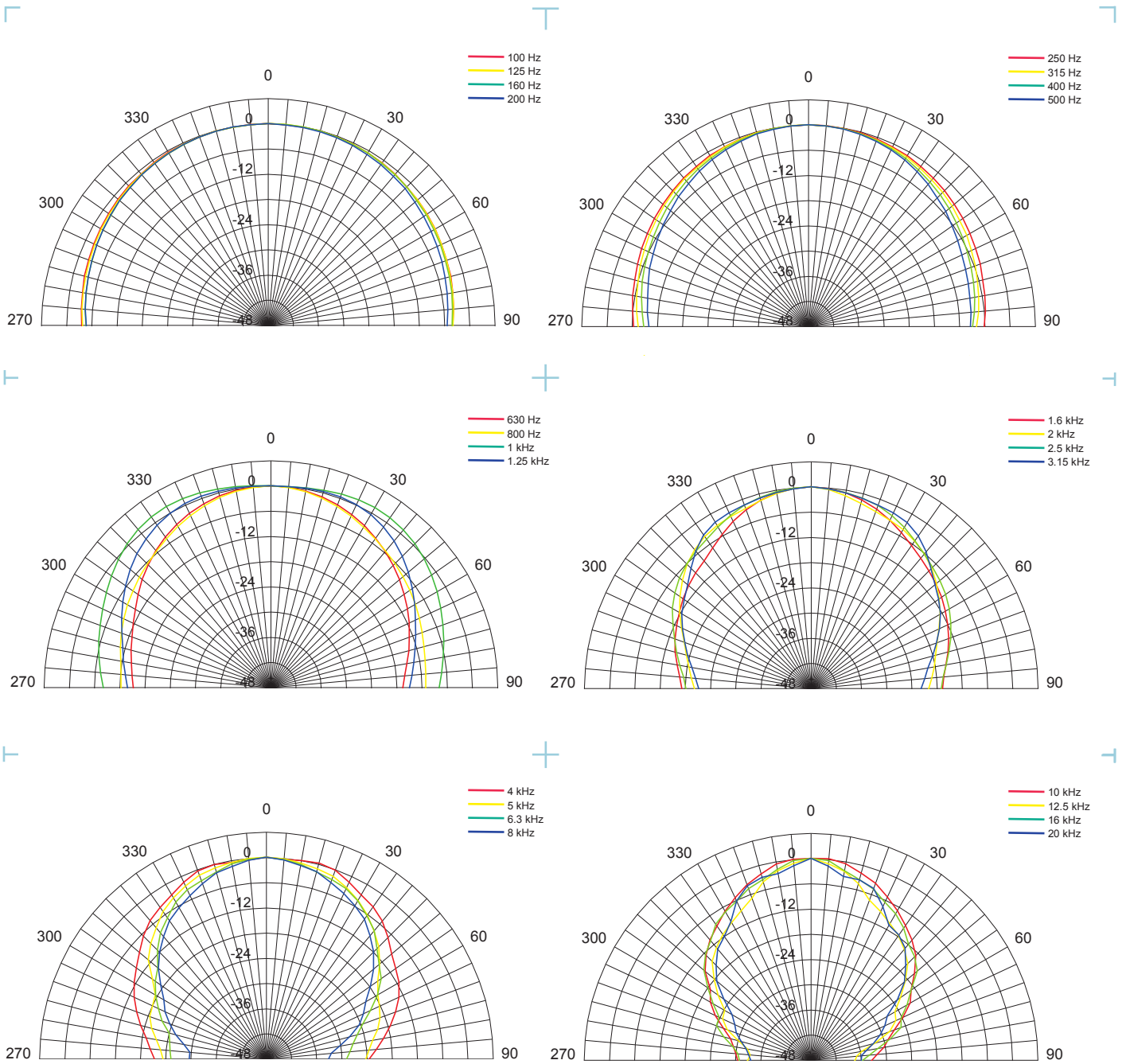
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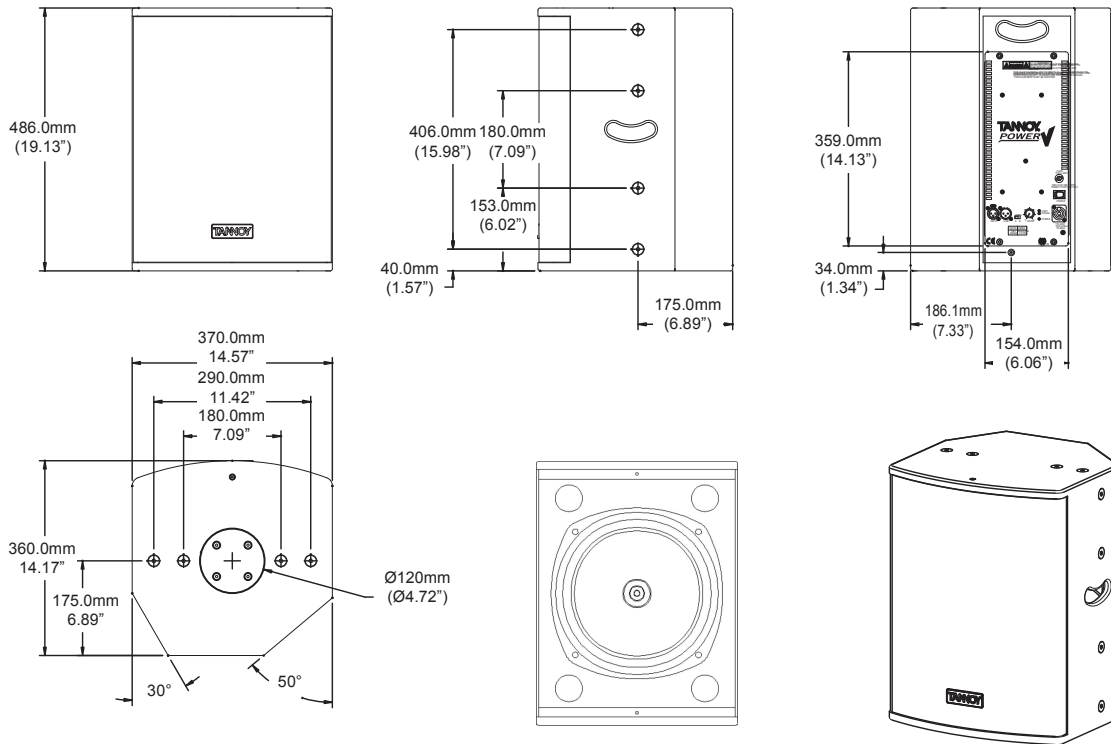
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## DIMENSIONAL SKETCHES



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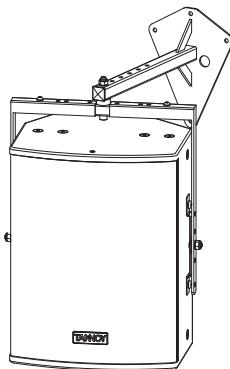
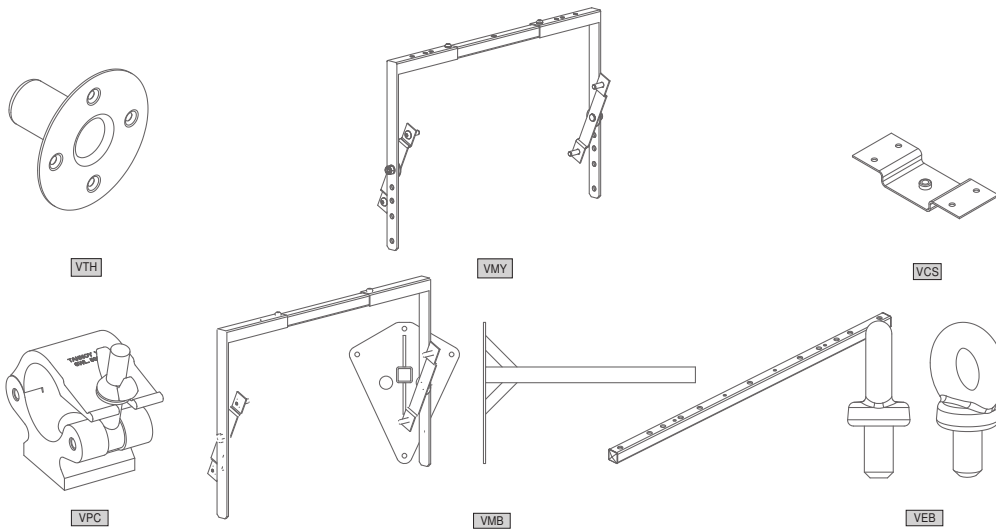
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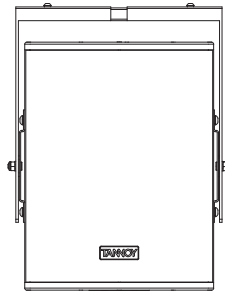
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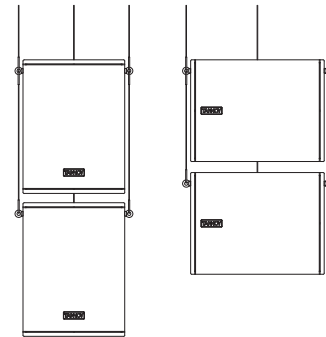
## OPTIONAL ACCESSORIES & MOUNTING OPTIONS



POWERV12 - VMY - VMB



POWERV12 + VMY



POWERV12 Flying

### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 2780	VMY	Black	1
8001 2790	VMY	White	1
8001 2800	VMB	Black	1
8001 2810	VMB	White	1
8001 2820	VEB	-	1
8001 2830	VCS	Black	1
8001 2840	VCS	White	1
8001 2860	VTH	Black	1
8001 2870	VTH	White	1
8001 2850	VPC	-	1

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## Architectural specifications

The loudspeaker shall consist of a 300mm (12.00") full range, point source Dual Concentric™ transducer. The low and high frequency elements shall be driven by an integrated single channel Class D amplifier through an internal passive crossover network operating at 1.4kHz. Performance of the loudspeaker shall meet or exceed the following criteria: Frequency response measured at 1 metre on axis with swept sine wave shall be 70Hz to 25kHz (-3dB) in full range mode and 100Hz to 30kHz in high pass mode. Rated average SPL shall be 120dB (anechoic) on axis at 1 metre. The dispersion of the loudspeaker shall be 90 degrees conical (-6dB).

The enclosure shall be an optimally tuned 37.5 litre vented 15mm (0.62") birch ply cabinet with 15mm (0.62") MDF front baffle. Connectors shall be 1 × female XLR (input), 1 × male XLR (link) and 1 × Neutrik Powercon. The speaker shall be fitted with the following controls and indicators: level control, blue power LED, green signal LED, red limit LED, full range / high pass switch (110Hz) and a power switch. The enclosure shall be fitted with 8 × integral M10 inserts for flying hardware and 8 × M10 yoke bracket inserts. There shall be 3 carry recessed handles and blanking plate for an optional pole mount adaptor.

The enclosure shall not exceed the following dimensions: 486 × 370 × 260mm or 19.13 × 14.57 × 14.17" (H × W × D).

The loudspeaker shall be the Tannoy... POWERV12.

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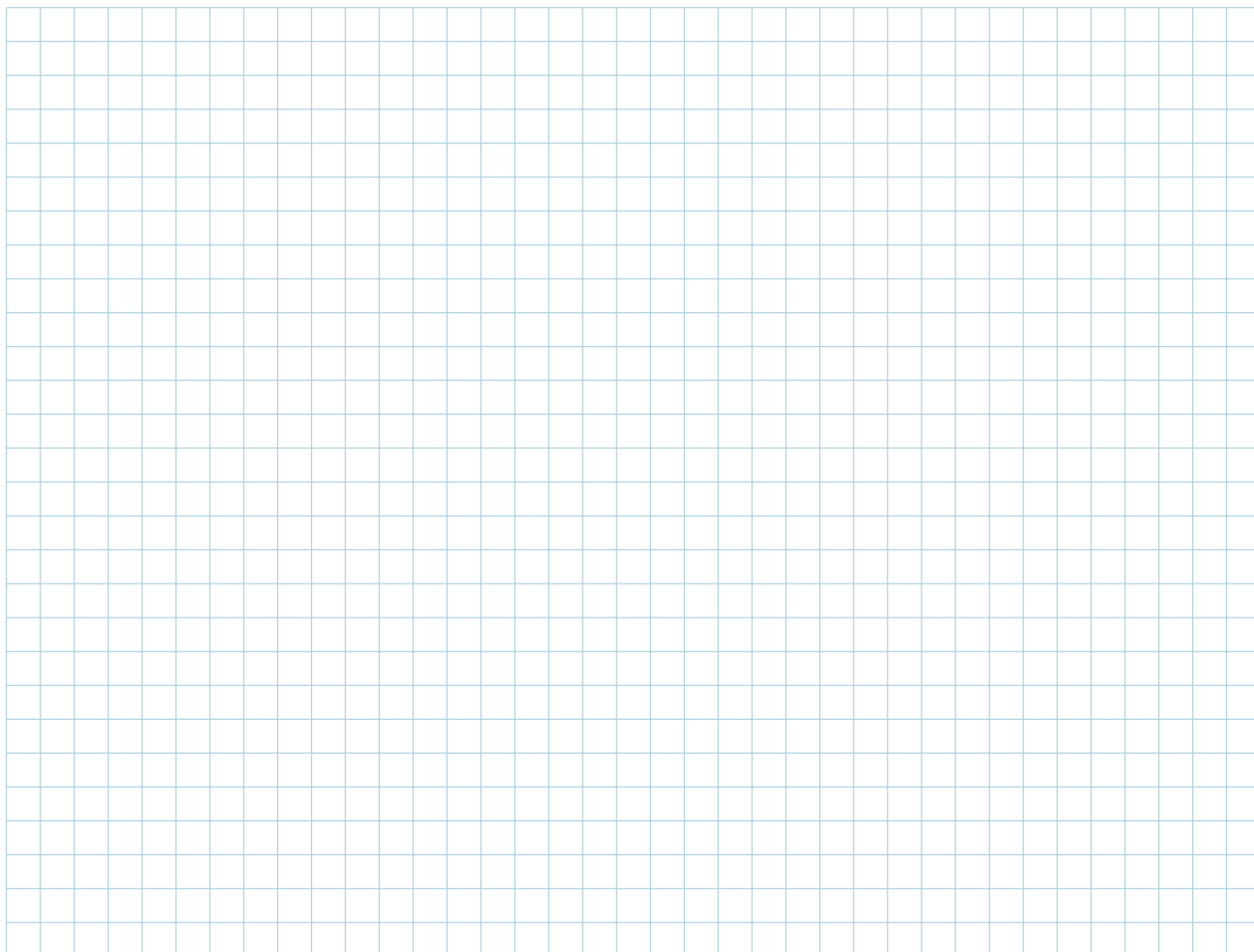
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## NOTES



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