



## Product Description

Conceived, engineered and built with precision in the United Kingdom, VXP Series represents the latest evolution of Tannoy's core philosophies in self-powered loudspeaker system design. The Tannoy VXP 6 features the brand new IDEEA™ (IntelliDrive Energy Efficient Amplifier) integrated power module from Lab.gruppen. The result is a highly compact, ultra-reliable and exceptionally efficient self-powered loudspeaker. VXP 6 offers a punchy and sonically superior solution for small-scale sound reinforcement as well as for critical-quality speech reproduction where clarity and natural vocal characteristics are paramount. The VXP 6 been sonically matched with the wider range of VXP Series models, this allows consistency in installations where a mix of products is utilised.

The VXP 6 is built around a single 150 mm (6") Dual Concentric™ driver mounted in an ultra-compact, rugged birch plywood cabinet with aesthetically profiled edges and an Airnet™-backed, powder-coated steel grille. The latest version of Tannoy's exclusive point source, constant directivity Dual Concentric drive unit ensures high sensitivity and exceptional efficiency. More than 60 years of research into Dual Concentric technology allows this unique configuration to deliver exceptionally smooth beam-width characteristics resulting in an even coverage pattern at all frequencies aiding predictable system design. Symmetrical dispersion characteristics enhance loudspeaker placement flexibility, allowing vertical or horizontal mounting of single or multi-cabinet arrays without compromising sound quality.

The perfectly matched Lab.gruppen IDEEA) integrated power module efficiently and effectively handles the demands of both fixed installation and portable audio. IDEEA modules are designed for superlative audio performance, robust power output and long-term durability – even with extended duty cycles up to round-the-clock operation. Extensive features to safeguard internal circuits and connected drivers ensure a long and trouble-free service life. At the heart of the IDEEA module is a patented Class D output stage capable of high power levels with very low distortion and minimal current draw – all with a net operating efficiency in excess of 80%. A universal switching power supply accepts any mains voltage from 70 – 265 V (+/- 10%) at 50 Hz or 60 Hz through the appropriate IEC cord. In Auto mode, the speaker turns on with signal present and switches to standby mode after 20 minutes of no input, with standby power consumption of less than 1 W. Manual control mode allows the speaker to be turned on and off as required. A switchable 90 Hz high-pass filter tailors response for use with a subwoofer.

Rear panel connections are provided for audio input (XLR-F), audio link (XLR-M) and AC power (Neutrik® powerCON®). VXP 6 is available in black or white textured paint finish as standard, with matching grilles, and is also available in custom matched RAL colours as an option.

## Features

- 150 mm (6") Dual Concentric full-range driver
- Well defined 90 degree dispersion for optimum coverage and forward gain
- Peak output of 118 dB
- Integrated Lab.gruppen IDEEA module providing ultra-reliable Class D amplification
- Versatile mounting via optional custom – designed hardware
- Pole-mountable for small-scale portable PA applications
- Exceptional sound and performance for a cabinet of this size
- Rugged and highly compact birch plywood enclosure
- Available in black or white textured paint finish; custom colours optional
- XLR input and link, powerCON mains (included)

## Applications

- Theatres, Auditoria and Houses of Worship
- Small scale PA and compact voice reinforcement
- Bars and in-fill for nightclubs
- Portable and installed corporate AV
- Theme parks and leisure venues
- Gymnasiums and small/medium sports arenas

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## TECHNICAL SPECIFICATIONS

### Loudspeaker VXP 6

<b>Frequency response (-3 dB) <sup>(1)</sup> Full-range mode</b>	88 Hz - 35 kHz	
<b>Frequency range (-10 dB) <sup>(1)</sup> Full-range mode</b>	80 Hz - 45 kHz	
<b>Frequency response (-3 dB) <sup>(1)</sup> Hi-Pass mode</b>	120 Hz - 35 kHz	
<b>Frequency range (-10 dB) <sup>(1)</sup> Hi-Pass mode</b>	100 Hz - 45 kHz	
<b>Dispersion (-6 dB)</b>	90 degrees conical	
<b>Driver complement</b>	1 x 150 mm (6") constant directivity Dual Concentric™	
<b>Crossover</b>	Passive 1.6 kHz with dynamic HF protection	
<b>Directivity factor (Q)</b>	5.6 averaged 1 kHz to 10 kHz	
<b>Directivity index (DI)</b>	7 dB averaged 1 kHz to 10 kHz	
<b>Rated maximum SPL <sup>(2)</sup></b>	112 dB (average) 118 dB (peak)	
<b>Distortion</b>		
10% Full Power (8.94 V) 250 Hz 1 kHz 10 kHz	2nd Harmonic 2.64% 0.223% 1.873%	3rd Harmonic 0.365% 0.458% 0.29%
1% Full Power (2.83 V) 250 Hz 1 kHz 10 kHz	2nd Harmonic 0.64% 0.062% 0.78%	3rd Harmonic 0.314% 0.436% 0.266%

### Construction

<b>Enclosure</b>	9.2 litre birch plywood, vented and internally braced
<b>Finish</b>	Textured black or white paint, with custom colours on request. Powder-coated perforated steel grille, Airnet™ cloth behind.
<b>Connectors</b>	1 x female XLR (input), 1 x male XLR (link), 1 x Neutrik powerCON
<b>Controls &amp; indicators</b>	Level Control Power LED (Blue) Signal LED (Green) Limit/Protect LED (Red) Full Range / HighPass Switch (110 Hz) Power Mode Switch Power Switch

<b>Fittings</b>	4 x M6 flying inserts, 2 x M6 yoke bracket inserts. Blanking plate for optional VTH pole mount
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<b>Dimensions</b>	333 x 225 x 215 mm (HxWxD) 13.1 x 8.9 x 8.1" (HxWxD)
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<b>Net weight</b>	7 kg (15.4 lbs)
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### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 6500	VXP 6	BLACK	2
8001 6501	VXP 6	WHITE	2

<b>Shipped weight</b>	15.5 kg (34.2 lbs)
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<b>Packed quantity</b>	2
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### Amplifier

<b>Maximum input signal for clip</b>	Input attenuator at Maximum: +4.5 dBu (Hard clip will occur at +14.5 dBu input signal)
<b>Dynamic range</b>	106 dB
<b>Efficiency</b>	> 90%
<b>Damping factor</b>	> 4 00 ref 8 ohms at 1 kHz
<b>Distortion</b>	< 0.05% @ 1 kHz -3 dB output (22 kHz bandwidth)
<b>Input impedance</b>	10 kohms unbalanced, 20 kohms balanced
<b>Damping factor</b>	> 400 ref 8 ohms at 1 kHz
<b>Distortion</b>	< 0.05% @ 1 kHz -3 dB output (22 kHz bandwidth)

### Protection systems

Over current limiter	Output current limiter, always active
Clip limiter	Output voltage clip limiter, always active
Temperature protection	Over temperature causes protective mute
Brownout	Automatic protection and recovery
Mains	Inrush current limiter
Indicators	1 x Power LED, 1 x Signal LED, 1 x Limit LED (Power LED: Red = Standby, Green = On, Yellow = Temperature protection active)

<b>Amplifier type</b>	Inherently bridged, globally modulated, high performance single channel Class D.
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### PSU Specifications

Input connector	Locking Neutrik powerCON
Voltage selection	Universal mains input
Type	High efficiency, regulated switch mode power supply
Efficiency	> 85% typical
Input voltage	100 Vac-240 Vac +/- 10%, 50-60 Hz +/-10%
Mains fuse	Internal
Fuse type	3.15AT
Other features	Inrush current limiter
Standby power consumption	< 1 W
Idle power consumption	< 15 W
Maximum power consumption	300 W

### Notes

(1) Average over stated bandwidth. Measured at 1 metre on axis in an anechoic chamber.

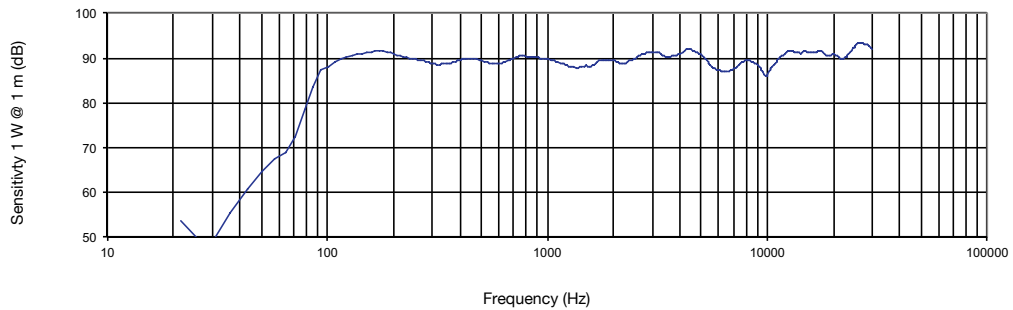
(2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber. A full range of measurements, performance data, and Ease™ Data can be downloaded at [www.tannoy.com](http://www.tannoy.com).

Tannoy is committed to a policy of continuous improvement through research and development. Though performance will equal or exceed published specifications, new materials or manufacturing processes could introduce variances. All figures are subject to change without notice. For critical applications, please confirm current specifications with your supplier or visit the Tannoy website at [www.tannoy.com](http://www.tannoy.com).



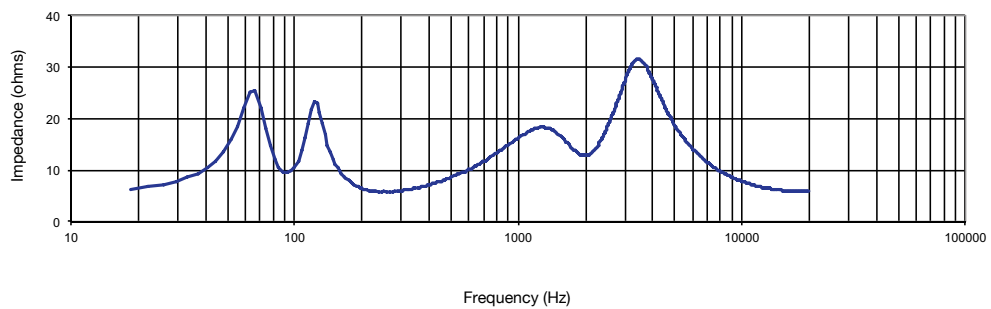
## PERFORMANCE MEASUREMENTS

1m on-axis Frequency Response



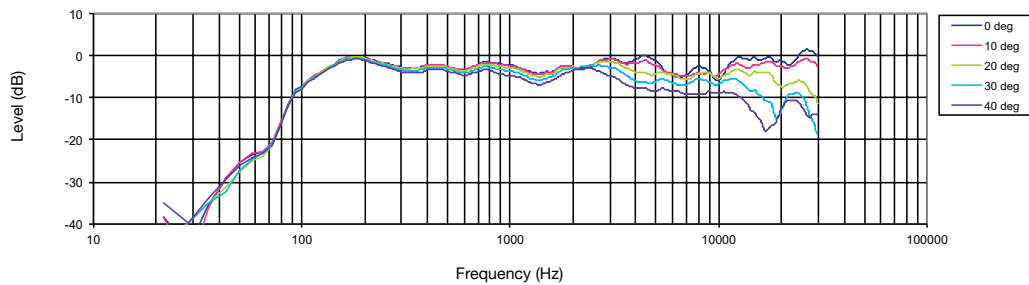
### ANECHOIC FREQUENCY RESPONSE

Impedance vs Frequency



### IMPEDANCE

Off-axis Frequency Response



### OFF-AXIS RESPONSE

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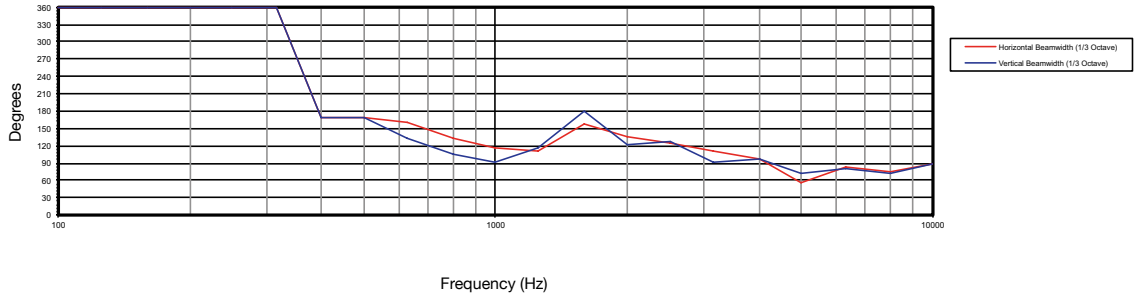
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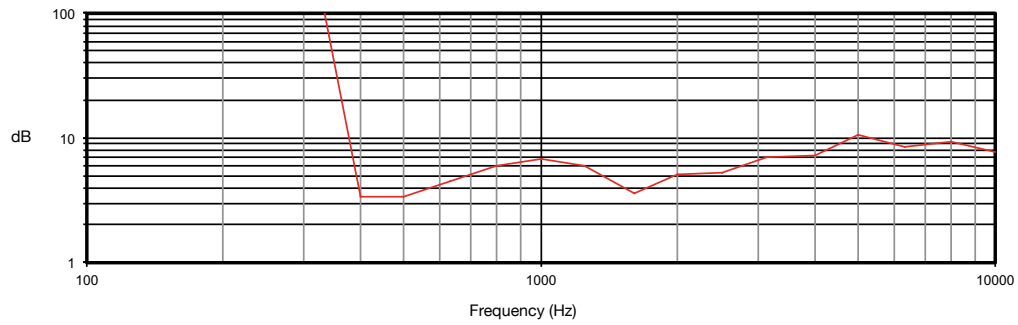
## PERFORMANCE MEASUREMENTS

Beamwidth vs Frequency



### BEAMWIDTH

DI vs Frequency



### DIRECTIVITY INDEX (DI)

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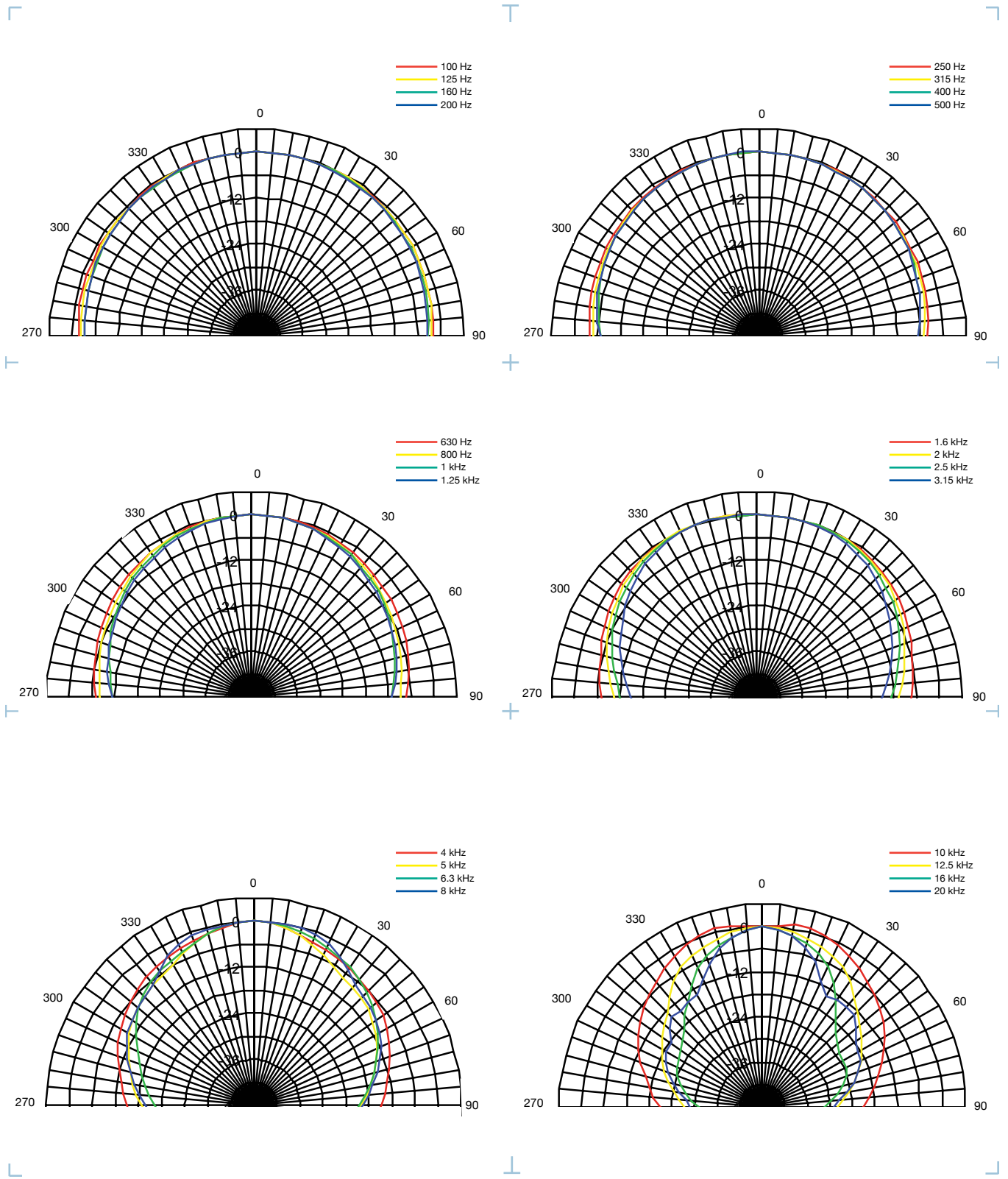
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# VXP 6

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



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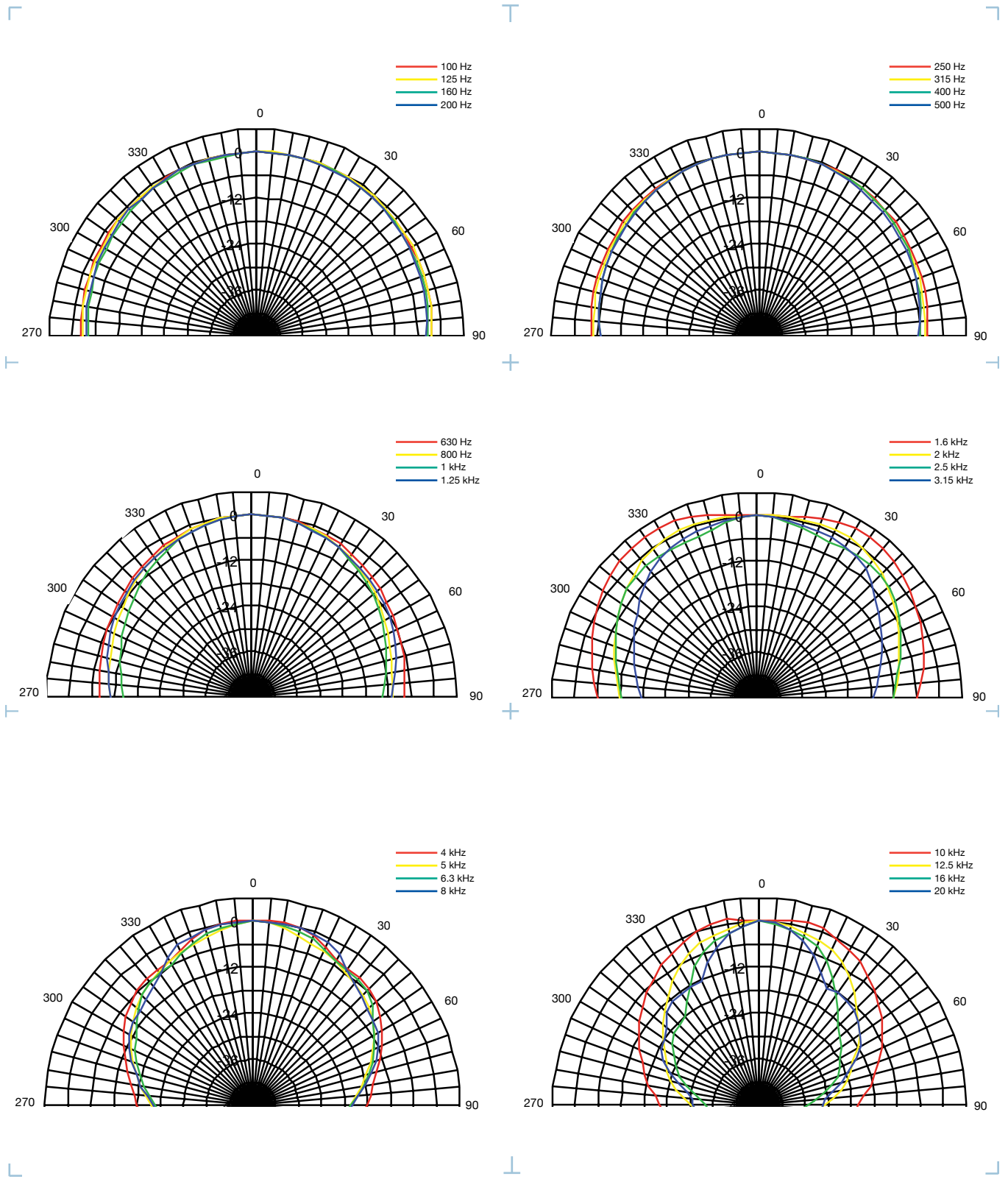
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## PERFORMANCE MEASUREMENTS - POLAR PLOTS (1/3 OCTAVE) VERTICAL



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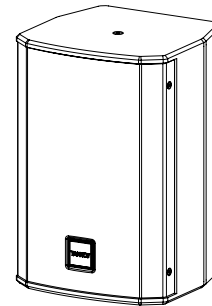
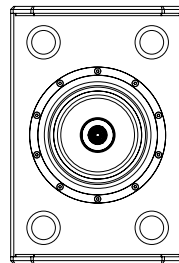
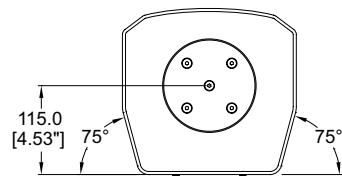
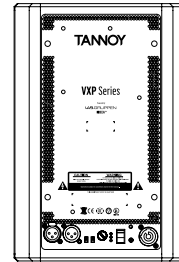
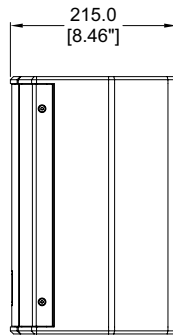
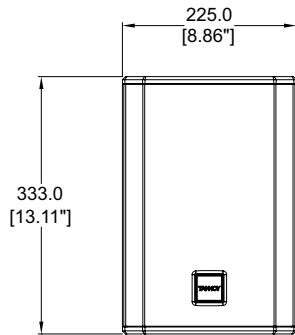
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# VXP 6

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## DIMENSIONAL DRAWINGS



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## Architect's and Engineer's specifications

The loudspeaker shall consist of a 150 mm (6") 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 1.6 kHz. The amplifier module shall incorporate an auto power down (APD) circuit that places the loudspeaker in standby mode with less than 1 W power consumption when input signal is absent for more than 20 minutes, resuming full operation when signal is again present at the input.

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 88 Hz to 35 kHz (3 dB) in full range mode and 120 Hz to 35 kHz in high pass mode. Rated average SPL shall be 112 dB (anechoic) on axis at 1 metre. The dispersion of the loudspeaker shall be 90 degrees conical (-6 dB).

The enclosure shall be an optimally tuned 9.2 litre vented birch plywood cabinet. Connectors shall be 1 x female XLR (input), 1 x male XLR (link) and 1 x 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 (110 Hz) and a power switch. The enclosure shall be fitted with 4 x integral M6 inserts for flying hardware and 2 x M6 yoke bracket inserts. There shall be a blanking plate for an optional pole mount adaptor.

The enclosure shall not exceed the following dimensions: 33 x 225 x 215 mm or 13.1 x 8.9 x 8.1" (H x W x D). The loudspeaker shall be the Tannoy VXP 6.