VXP 12Q

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 with precise pattern control. VXP 12Q offers a punchy and sonically superior solution for medium-scale sound reinforcement as well as for critical-quality speech reproduction where clarity and natural vocal characteristics are paramount. The VXP 12Q has 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 12Q is built around a single 305 mm (12") Power Dual™ 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 Power Dual drive unit ensures high sensitivity and exceptional efficiency. By coupling PowerDual with the new Q-Centric Waveguide™ (QCW), VX 12Q brings best of both worlds – true point source acoustical performance combined with more tightly controlled 75 x 40 degree dispersion, resulting in less unwanted shading effects and optimized forward gain. The driver assembly can be rotated 90 degrees in the cabinet to allow for versatile mounting without compromise to coverage.

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 12Q 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

- PowerDual full-range driver with QCW™ deliver ing best of both worlds – true point source combined with new horn design allowing tight vertical coverage.
- Well defined 75 x 40 degree dispersion for optimum coverage and forward gain
- Peak output of 129 dB
- Integrated Lab.gruppen IDEEA module providing ultra-reliable Class D amplification
- Versatile mounting via optional custom-designed hardware
- Pole-mountable for medium scale portable PA applications
- Exceptional performance for a cabinet of this size
- 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
- Medium scale PA.
- Bars and nightclubs
- Portable and installed corporate AV
- Theme parks and leisure venues
- Gymnasiums and small/medium sports arenas
- Cinemas

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TECHNICAL SPECIFICATIONS

Loudspeaker	VXP 12Q
Frequency response (-3 dB) (1) Full-range mode	70 Hz - 25 kHz
Frequency range (-10 dB) (1) Full-range mode	60 Hz - 30 kHz
Frequency response (-3 dB) (1) Hi-Pass mode	100 Hz - 25 kHz
Frequency range (-10 dB) (1) Hi-Pass mode	80 Hz - 30 kHz
Dispersion (-6 dB)	75 degrees (H) x 40 degrees (V)
Driver complement	1 x 300 mm (12") PowerDual™ with Q-Centric waveguide
Crossover	Passive 1.5 kHz
Directivity factor (Q)	13 (averaged 1 kHz to 8 kHz)
Directivity index (DI)	11.1 dB (averaged 1 kHz to 8 kHz)
Rated maximum SPL (2)	123 dB (average) 129 dB (peak)

Distortion

10% Full Power (16.7 V)	2nd Harmonic	3rd Harmonic
250 Hz	0.72%	0.17%
1 kHz	0.57%	0.76%
10 kHz	5.11%	0.41%
1% Full Power (5.30 V)	2nd Harmonic	3rd Harmonic
250 Hz	0.16%	0.19%
1 kHz	0.18%	0.49%
10 kHz	1.63%	0.08%

Construction

Enclosure	36.4 litre, 15mm (enclosure) and 18 mm (front) birch plywood, vented and internally braced.
Finish	Textured black or white paint, with custom colours on request. Powder coated perforated steel grille, Airnet cloth behind
Connectors	1 x female XLR (input), 1 x male XLR (link), 1 x Neutrik powerCON
Controls & indicators	Level Control Power LED (Blue) Signal LED (Green) Limit/Protect LED (Red) Full Range / HighPass Switch (110 Hz) Power Mode Switch Power Switch
Fittings	8 x M10 Flying inserts (portrait or landscape mounting), 8 x M10 yoke bracket inserts. 2 x Integrip carrying handles. Blanking plate for optional VTH pole mount
Dimensions	490 x 370 x 380 mm (HxWxD) 19.3 x 14.6 x 15" (HxWxD)
Net weight	23 kg (50.7 lbs)
Shipped weight	25 kg (55.1 lbs)
Packed quantity	1

Amplifier

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

Protection systems

Over current	Output current limiter, always active
Clip limiter	Output voltage clip limiter, always active
Temperature	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)
Amplifier type	Inherently bridged, globally modulated, high performance single channel Class D.

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 consumtion	< 1 W
Idle power consumption	< 15 W
Maximum power consumtion	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.

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.

Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 6550	VXP 12Q	BLACK	1
8001 6551	VXP 12Q	WHITE	1

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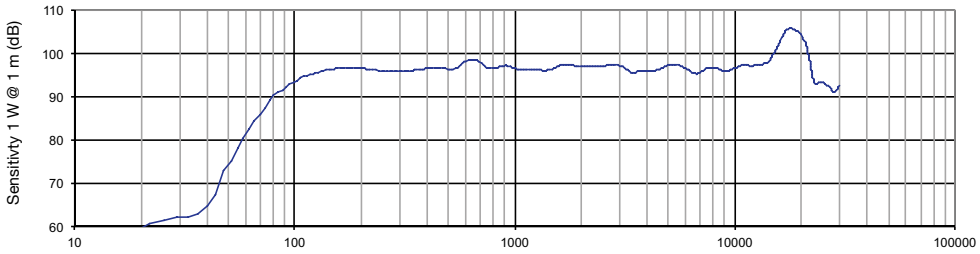
VXP 12Q

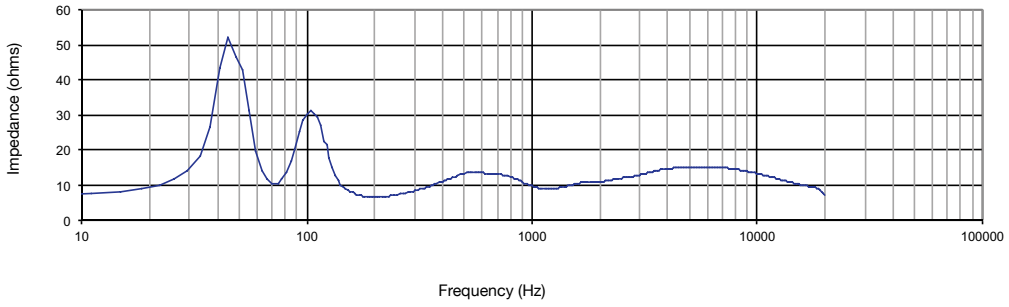
PERFORMANCE MEASUREMENTS

1m on-axis Frequency Response



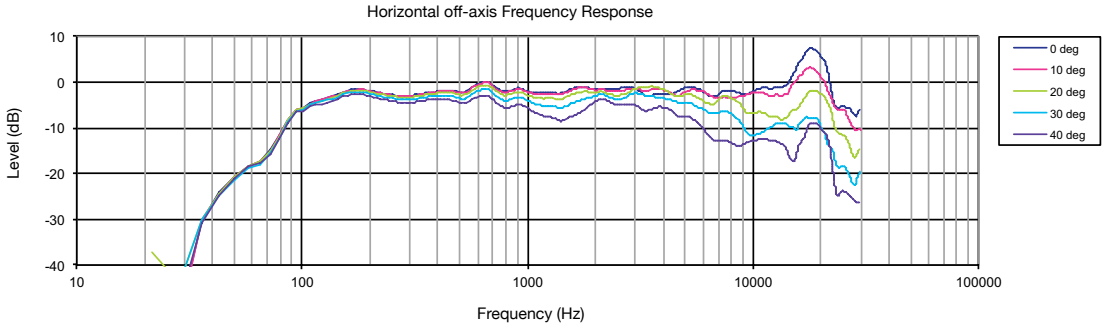
ANECHOIC FREQUENCY RESPONSE

Impedance vs Frequency



IMPEDANCE

Horizontal off-axis Frequency Response



HORIZONTAL OFF-AXIS RESPONSE

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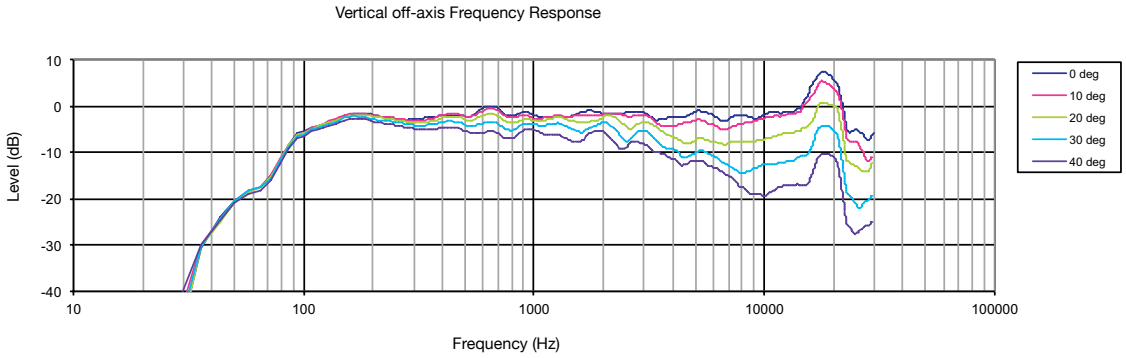
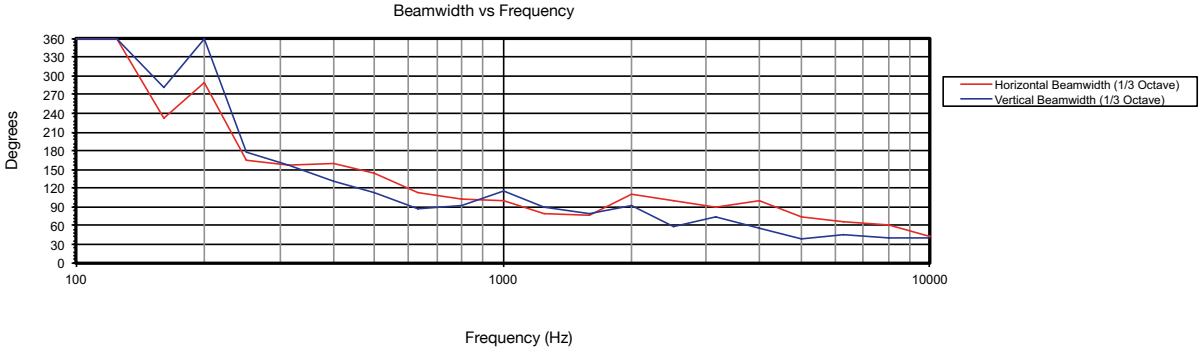
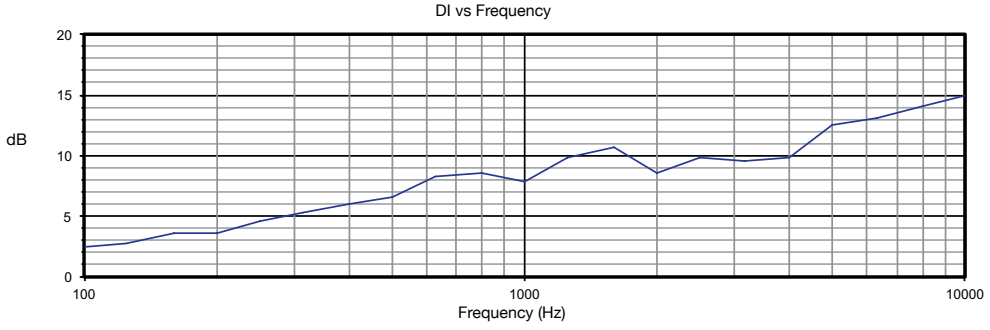
PERFORMANCE MEASUREMENTS



VERTICAL OFF-AXIS RESPONSE



BEAMWIDTH



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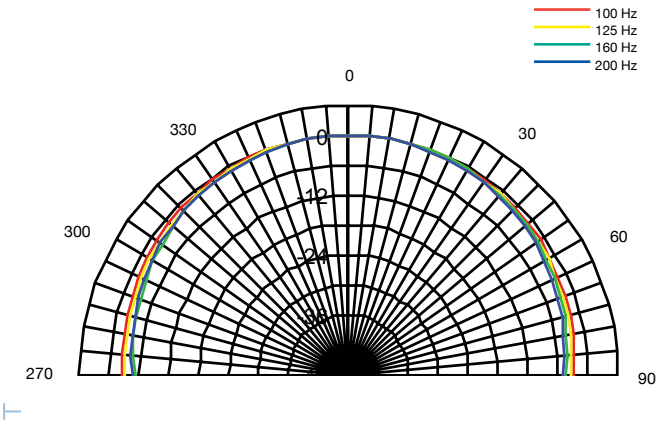
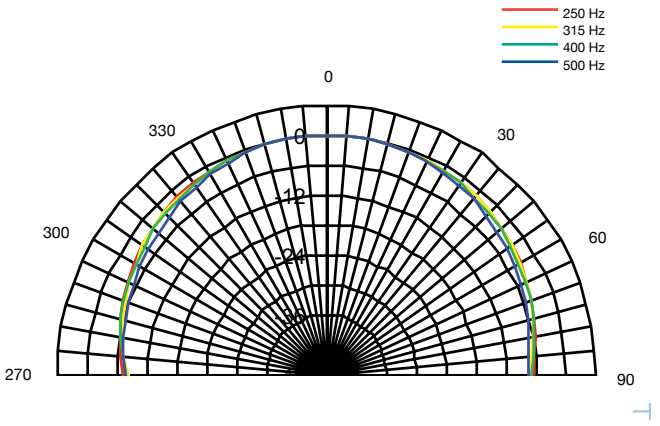
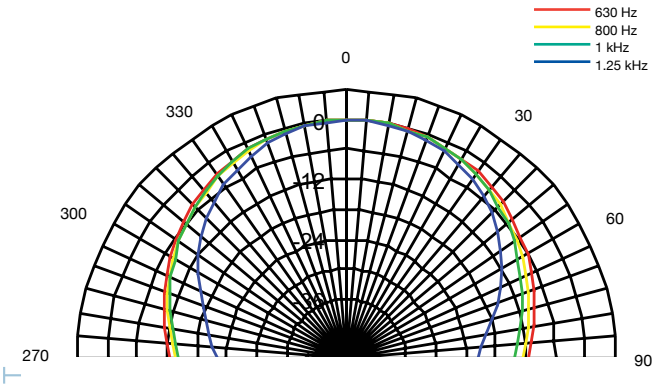
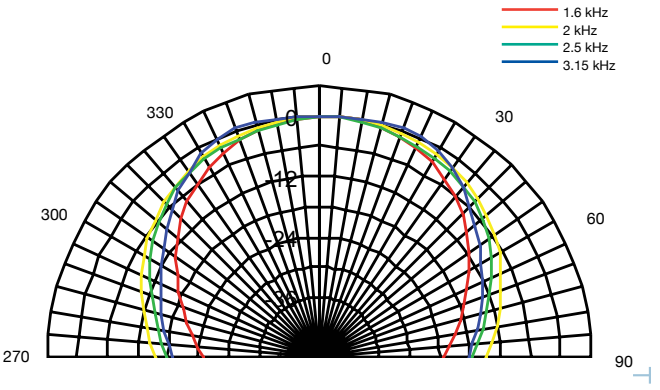
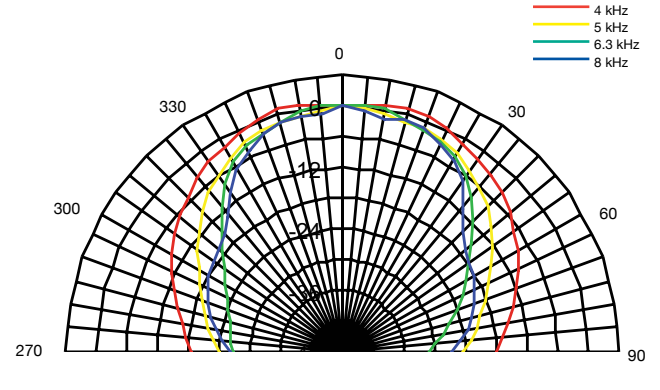
PERFORMANCE MEASUREMENTS - POLAR PLOTS (1/3 OCTAVE) HORIZONTAL

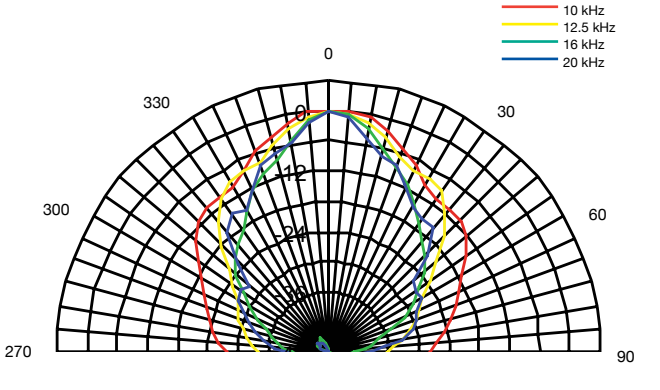












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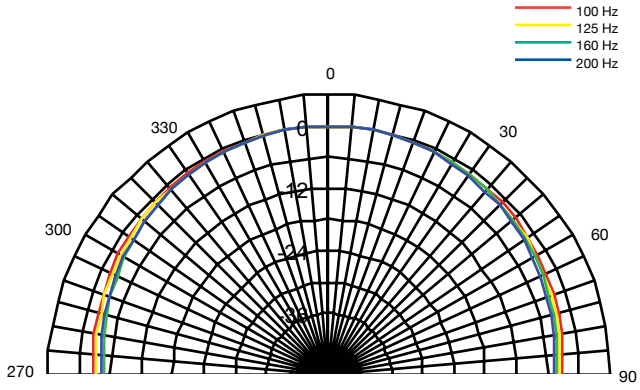
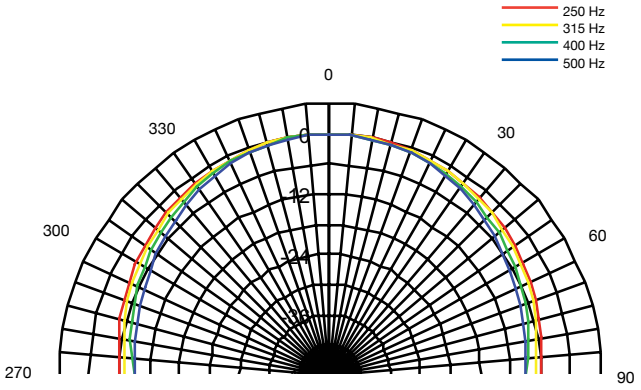
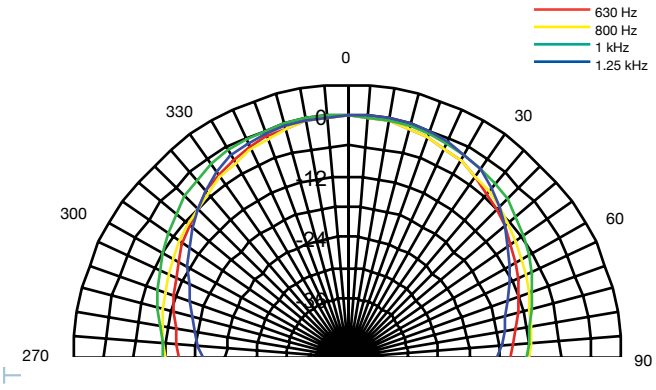
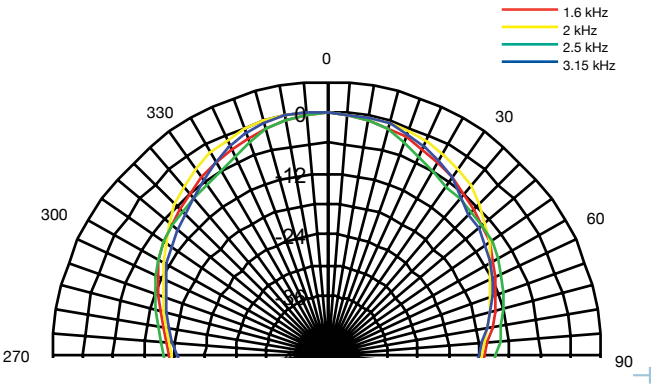
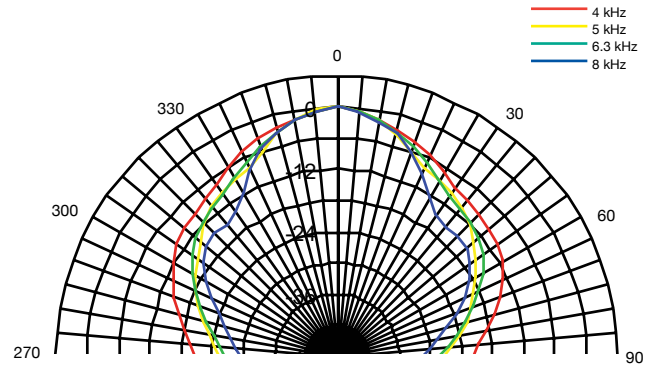
PERFORMANCE MEASUREMENTS - POLAR PLOTS (1/3 OCTAVE) VERTICAL

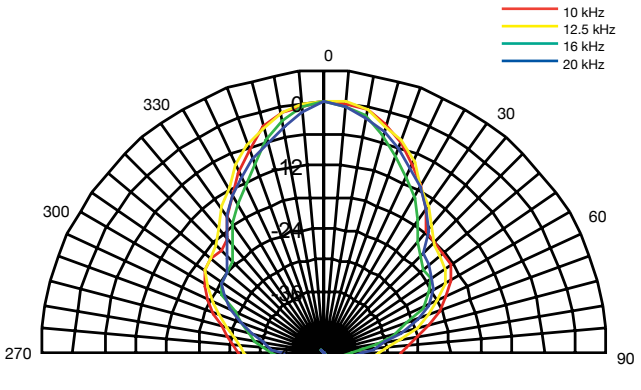












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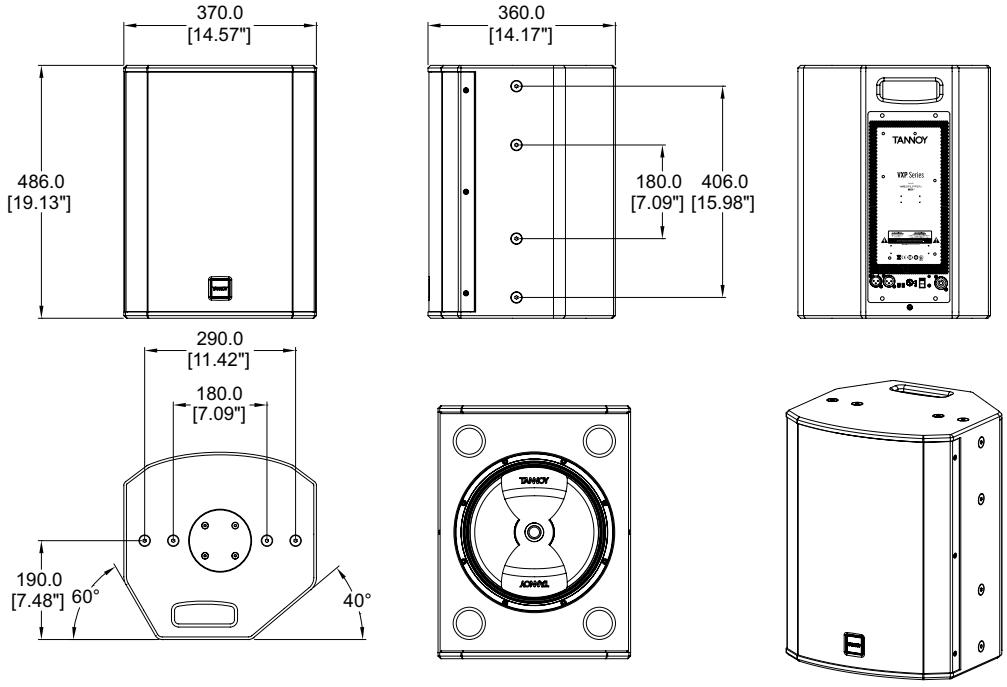
DIMENSIONAL DRAWINGS



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Architect's and Engineer's specifications

The loudspeaker shall consist of a 305 mm (12") full-range, point source Power Dual 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 1.5 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 70 Hz to 25 kHz (3 dB) in full range mode and 100 Hz to 25 kHz in high pass mode. Rated average SPL shall be 123 dB (anechoic) on axis at 1 metre. The dispersion of the loudspeaker shall be 75 degrees horizontal by 40 degrees vertical (-6 dB).

The enclosure shall be an optimally tuned 36.4 litre vented 15 mm (0.62") birch plywood cabinet with 18 mm (0.71") birch plywood front baffle. 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 8 x integral M10 inserts for flying hardware, 8 x M10 yoke bracket inserts and an integrated carrying handle. There shall be a blanking plate for an optional pole mount adaptor.

The enclosure shall not exceed the following dimensions: 486 x 370 x 360 mm or 19.1x 14.6 x 14.1" (H x W x D). The loudspeaker shall be the Tannoy VXP 12Q.

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