



## Features

- Newly refined 130 mm (5.0") ICT transducer for greater durability and longevity
- High power & high sensitivity with extended frequency response
- Wide, controlled, constant directivity dispersion for optimum coverage
- Does not suffer from energy loss in the vertical plane at crossover as with two-way discrete designs
- Low insertion-loss, 30 W line transformer for a more powerful and dynamic performance
- Convenient front-tapping switch for settings
- Magnetically-adhering grille system for easy custom painting and optional Arco designer grilles for minimal architectural impact
- Three-clamp, self-aligning mounting system
- UV resistant baffle and grille
- Packaged with classic grille, tile rails and C-ring for quick and easy installation and simple stocking logistics

## Applications

- Voice Alarm Systems
- Multizone Foreground Music & Paging Systems
- Boardrooms & Offices
- Business Music Systems
- Airports, Convention Centres, Hotels
- Reception / Waiting Rooms
- Houses of Worship
- Retail Outlets / Shopping Malls
- Lounges / Bars
- Cruise Ships
- Courtrooms

## Product description

The Tannoy CMS 503ICT PI is a wide bandwidth, high power-handling and high sensitivity loudspeaker built around CMS 3.0 – the third generation of Tannoy's revolutionary Ceiling Monitor System technology. Incorporating a newly refined version of Tannoy's proprietary ICT™ point-source driver, the CMS 503ICT PI has been re-engineered for optimum compatibility with Lab.gruppen commercial amplifiers while also delivering consistent broadband directivity, precise articulation for voice and music, and exceptional long-term reliability.

The point source configuration of the Tannoy ICT driver's mid-bass and tweeter sections ensures a wide and controlled dispersion for optimum coverage, avoiding the significant energy losses in the vertical plane at the crossover frequency that are inherent in typical two-way designs. The ICT (Inductive Coupling Technology) drive unit also addresses two common component failures in background music systems: the tweeter and the crossover. Use of wireless electromagnetic coupling to drive the tweeter means that no crossover is required, making the ICT drive unit exceptionally reliable and ideal for applications where constant heavy usage is the norm. The mineral-loaded polypropylene cone material and nitrile rubber surround further enhance durability and long-term reliability.

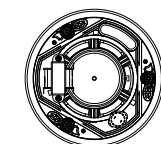
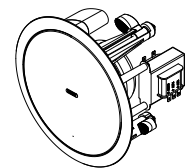
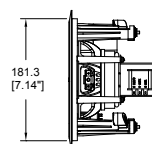
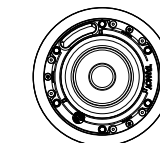
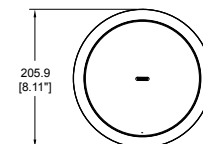
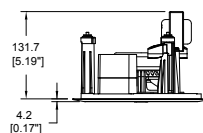
The CMS 503ICT PI utilizes a 16 ohm driver, making it ideal for use in high performance low-impedance systems (with optimized performance when used in conjunction with Lab.gruppen LUCIA amplifiers). The low-insertion loss 30 W transformer features convenient front bezel switching for taps at 30 W, 15 W and 7.5 W, with an additional 3.75 W tap for traditional constant voltage systems.

The CMS 503ICT PI also features extra clamp extension to accommodate thicker ceiling panels, and a locking design that prevents inadvertent over-screwing. Magnetic grille attachment enables easy removal and fitting for custom painting and tapping changes with grilles now available as either traditional style (inset in bezel) or new Arco™ style, which conceals the entire unit for architect-friendly aesthetic appeal.

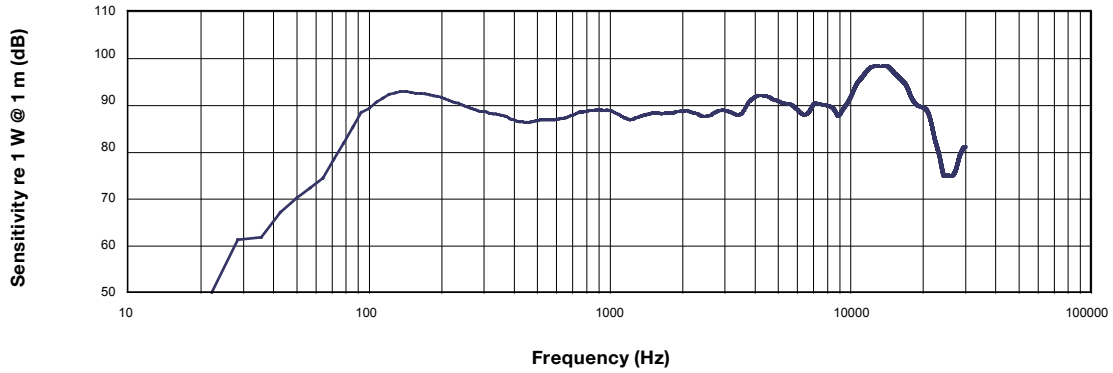
The CMS 503ICT PI is supplied without a back-can. All models are supplied with classic grille, two tile support rails and one C-ring; Arco grille back-can and plaster (mud) ring are available as optional accessories.

## Physical data

|  |                  |  |                  |
|--|------------------|--|------------------|
| <b>Bezel diameter:</b>                                   | 205.9 mm (8.11") | <b>Hole Cutout Diameter:</b>                                   | 190.0 mm (7.48") |
| <b>Front of ceiling surface to rear of speaker unit:</b> | 131.7 mm (5.19") | <b>Front of accessory backcan bezel to top of safety loop:</b> | 153.5 mm (6.04") |

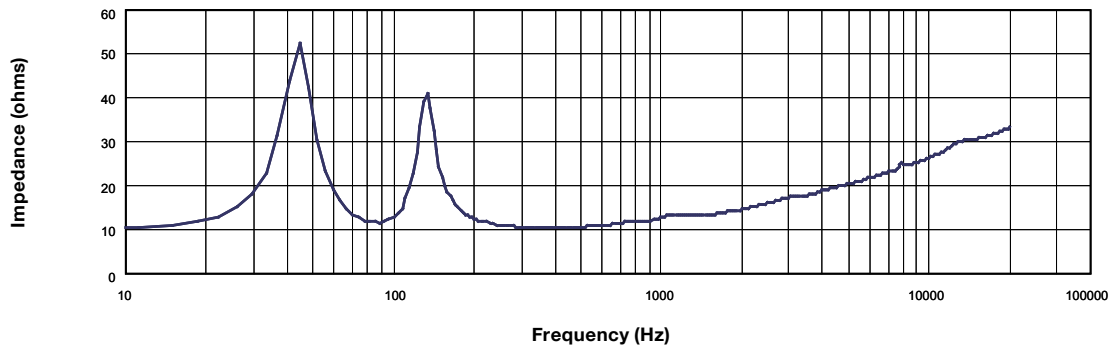


### 1 m on-axis Frequency Response



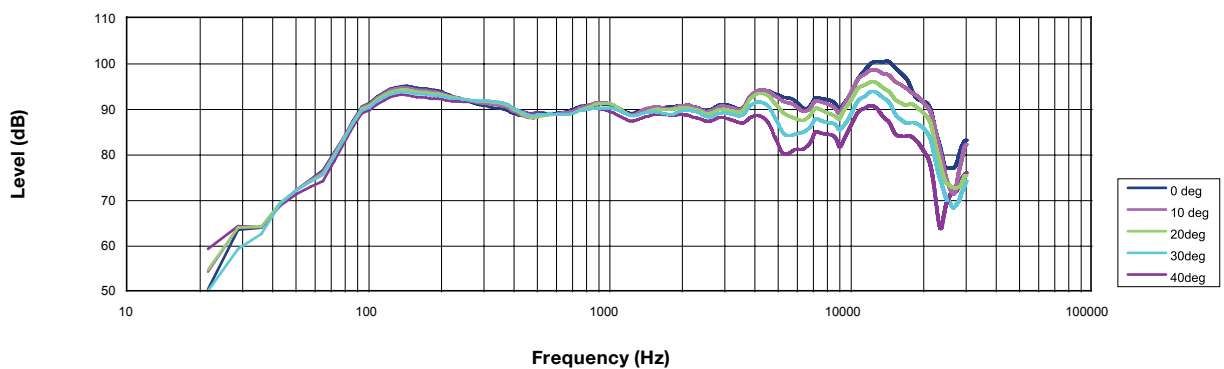
### Anechoic Frequency Response

### Impedance vs frequency



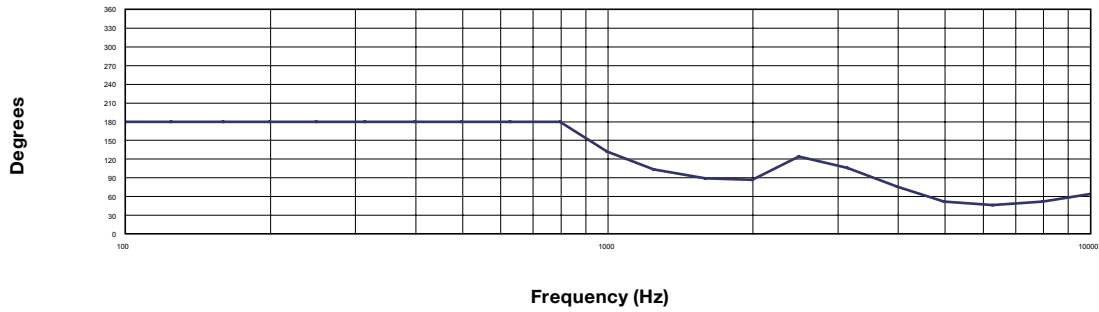
### Impedance

### Off-axis Frequency Response



### Off Axis Response

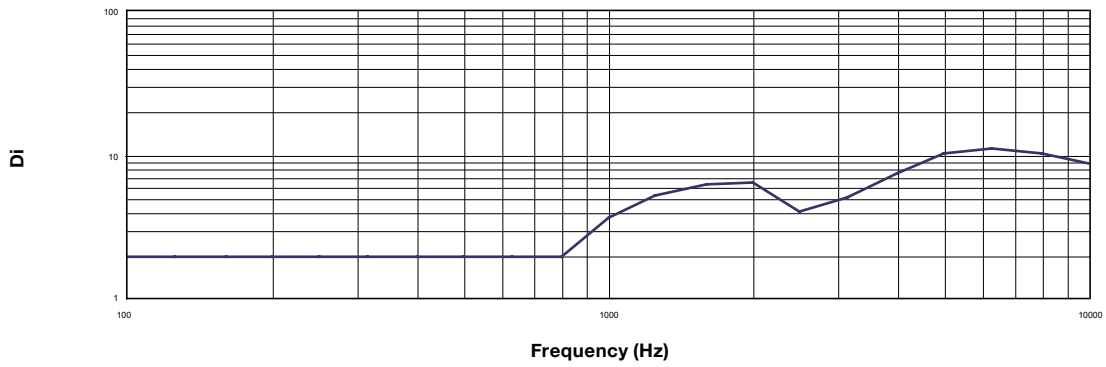
Beamwidth vs Frequency



Beamwidth

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Directivity Index (DI)



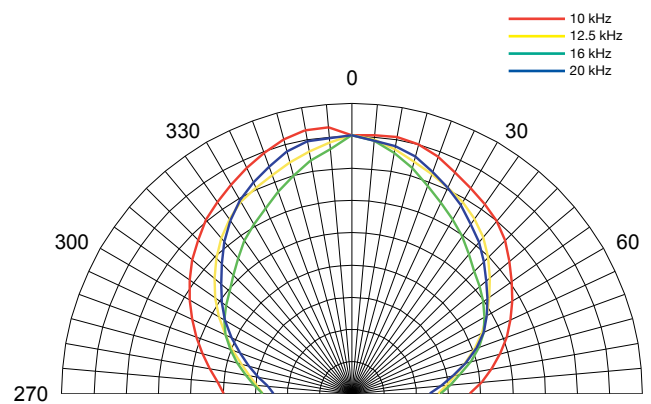
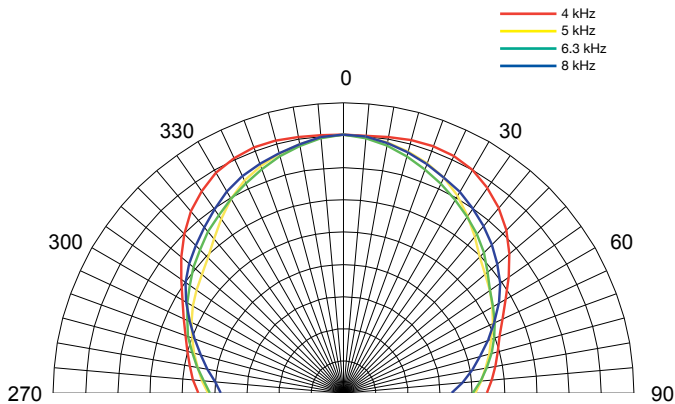
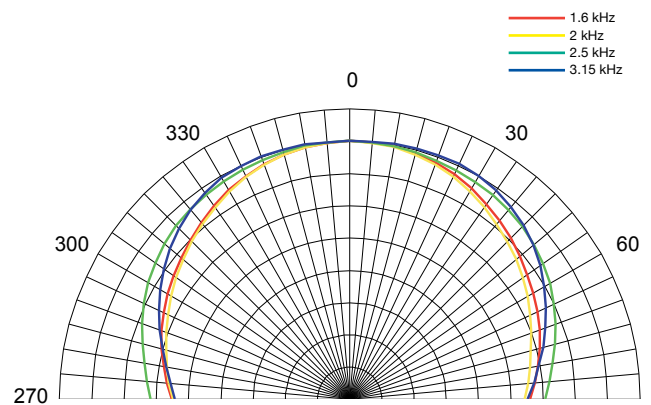
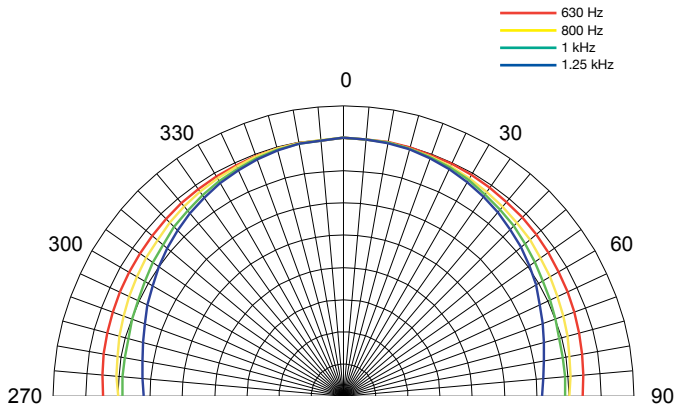
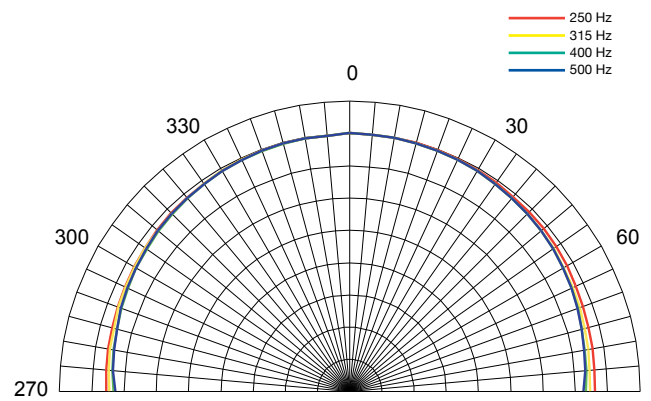
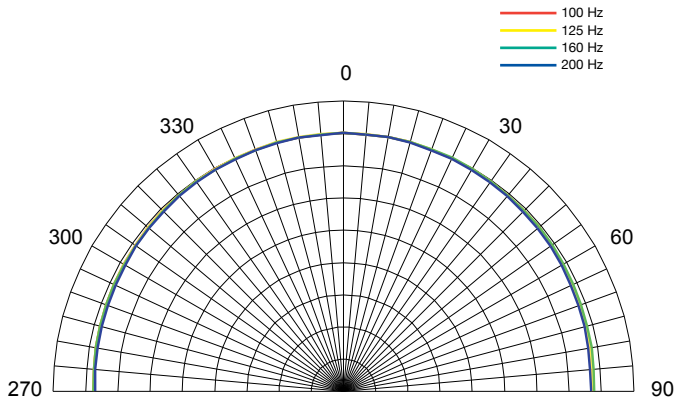
Directivity Index

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# Technical Data Sheet

Polar plots (1/3 octave)

# CMS 503ICT PI



# Technical Data Sheet

## Specifications

# CMS 503ICT PI

### Performance

|   |   |
|---|---|
| <b>Frequency range (-10 dB)<sup>(1)</sup></b>       | 71 Hz - 24 kHz  |
| <b>System sensitivity (1 W @ 1 m)<sup>(2)</sup></b> | 89 dB (1 W = 4 V for 16 Ohms)   |
| <b>Nominal Coverage Angle</b>                       | 90 degrees conical  |
| <b>Coverage Angle (1 kHz to 6 kHz)</b>              | 105 degrees   |
| <b>Directivity Factor (Q)</b>                       | 5.6 averaged 1 kHz to 6 kHz   |
| <b>Directivity Index (DI)</b>                       | 7.0 averaged 1 kHz to 6 kHz   |
| <b>Power Handling<sup>(3)</sup></b>                 |   |
| Average   | 50 W  |
| Programme   | 100 W   |
| Peak  | 200 W   |
| <b>Recommended Amplifier Power</b>                  | 100 W @ 16 ohms   |
| <b>Nominal Impedance (Lo, Z)</b>                    | 16 ohms   |
| <b>Rated maximum SPL</b>                            |   |
| Average   | 106 dB  |
| Peak  | 112 dB  |
| <b>Transformer Taps (via front rotary switch)</b>   |   |
| 70 V  | 30 W (165 Ω) / 15 W (330 Ω) / 7.5 W (660 Ω) / 3.75 W (1320 Ω) / OFF & low impedance operation |
| 100 V   | 30 W (330 Ω) / 15 W (660 Ω) / 7.5 W (1320 Ω) / OFF & low impedance operation                  |
| <b>Crossover</b>                                    | 7 kHz inductively coupled   |

### Transducers

|                       |   |
|-----------------------|---|
| <b>Low Frequency</b>  | 130 mm (5.00") mineral loaded polypropylene |
| <b>High Frequency</b> | ICT aluminium dome                          |

### Physical

|  |   |
|--|---|
| <b>Enclosure</b>                                       |   |
| Backcan  | Zinc plated steel   |
| Baffle   | Reflex loaded UL 94V-0 rated ABS  |
| Grille   | Steel, with weather resistant coating   |
| <b>Safety Features</b>                                 | Safety ring located at rear of enclosure for load bearing safety bond   |
| <b>Clamping Design</b>                                 | Security toggle clamp<br>Min / Max clamping range 9.5 mm (0.37") / 60 mm (2.36")<br>Recommended clamp torque: 1.5 Nm<br>Separate backcan for pre-installation |
| <b>Backcan Options</b>                                 | Cable clamp & squeeze connector for conduit up to 22 mm   |
| <b>Cable Entry Options</b>                             | 3 Sets of horizontal positions 19 / 22 / 28 mm (0.75" / 0.87" / 1.10")  |
| <b>Conduit Knockouts on PI Backcan</b>                 | Removable locking connector with screw terminals with "loop through" facility   |
| <b>Connectors</b>                                      | UL-1480, UL-2043, CE  |
| <b>Compliance</b>                                      |   |
| <b>Dimensions</b>                                      |   |
| Bezel diameter   | 205.9 mm (8.11")  |
| Front of ceiling surface to rear of speaker unit       | 131.7 mm (5.19")  |
| Front of accessory backcan bezel to top of safety loop | 153.5 mm (6.04")  |
| <b>Hole cutout diameter (all models)</b>               | 190 mm (7.48")  |
| <b>Net Weight (ea)</b>                                 |   |
| CMS 503ICT PI  | 2.85 kg (6.28 lbs)  |
| PI Backcan   | 2.6 kg (5.73 lbs)   |
| <b>Included Accessories</b>                            | C-Ring, tile-bridge kit, paint mask, cut-out template, grille   |
| <b>Optional Accessories</b>                            | Plaster (mud) ring, Arco grille   |
| <b>Packed Quantity</b>                                 | 2   |

### Ordering Information

| Part Number                                | Colour            |
|--|-------------------|
| 8001 7510<br>CMS 503ICT PI                 | White / Paintable |
| 8001 4180<br>CMS 503<br>Plaster (Mud) Ring | Zinc Plated Steel |
| 8001 7550<br>CMS 503 PI Backcan            | Zinc Plated Steel |
| 8001 7880<br>CMS 503 Arco Grille           | White / Paintable |



### Notes:

1. Average over stated bandwidth. Measured in an IEC baffle in an Anechoic Chamber
2. Unweighted pink noise input, measured at 1 metre on axis
3. Long term power handling capacity as defined in EIA - 426B test

A full range of measurements, performance data, CLF and Ease™ Data for CMS 503ICT PI can be downloaded from [www.tannoypro.com](http://www.tannoypro.com).

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods may introduce variations in actual performance; however, actual performance always will 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.

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