

FC-8TPI

PRE-INSTALL CEILING LOUDSPEAKER

TECHNICAL DATA SHEET



PRODUCT SUMMARY

The IsoFlare™ FC-8TPI is a full bandwidth, high sensitivity ceiling loudspeaker designed for the ultimate in fidelity, coverage, and aesthetics.

Designed for use in applications requiring pre-installed backcans, where the first fix can be carried out during the electrical installation without the worry of damaging the loudspeaker parts during the building construction phase.

The IsoFlare™ FC range is the new benchmark in point source technology for prestigious commercial environments. Decades of experience from acoustic and mechanical engineers specializing in this technology have honed existing skills complemented with the very latest in design & engineering techniques to bring IsoFlare™ to the premium commercial space in an integrated package.

Unlike most 'coax' offerings, the IsoFlare™ driver exhibits excellent harmonic alignment between HF and LF sources, the effect of which is to deliver accurate and natural reproduction with superb tonal balance.

Propagating a spherical wavefront, homogeneously aligned on all axes, the IsoFlare™ point source driver yields an even response throughout the listening area; a constant time delay over the entire frequency spectrum providing exceptional off-axis performance.

The FC-8TPI is designed for applications requiring a combination of premium sonic quality for music and speech reinforcement with exceptional reliability, in an architect/designer/installer friendly solution.

The IsoFlare FC-8TPI is supplied in two parts and can be purchased separately if necessary, depending on the building construction phases:

FC-8TPIC Back Can (Pre-wire back can) – for separate backcan installation.

FC-8DRV (Driver & Baffle assembly)

Plaster (Mud) rings are available as optional accessories.

KEY FEATURES

- Patented toolless high travel secure-clamp mechanism for fast and trouble-free installation.
- Bezel-less grille - magnetically secured - removable logo. Allows for a single step painting process if necessary. No requirement for adaptors to accommodate optional square grilles.
- Ferrofluid cooled titanium HF with neodymium magnet system.
- Weather treated multi fiber cone; stiffness combined with controlled top end roll off, for an accurate midrange.
- Fluted Surround Technology – Conventional driver surround profiles can reflect energy back down the cone causing coloration.
- Optimized smooth transition baffle (no sharp edges which cause diffraction).
- Full bandwidth exceptionally low insertion loss 60W 70/100V transformer.
- High-current premium crossover components (Air Core Inductors & Polypropylene Capacitors).
- Easy Access Tap Rotary Selector Switch.
- Enhanced voicing presets available via AtlasIED Atmosphere platform.

APPLICATIONS

- Boardrooms & Corporate Offices
- Airports, Convention Centers, Hotels
- Casinos
- Houses of Worship
- Retail Outlets, Shopping Malls
- Museums
- Lounges / Bars
- Sports Facilities
- Health Clubs
- Performing Arts Centers
- Education Facilities
- Cruise Ships
- Courtrooms
- Multizone Foreground Music & Paging Systems

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AUDIO SPECIFICATIONS / PERFORMANCE

SYSTEM	FC-8TPI
Type	Two-Way, Full Range, Ceiling Loudspeaker (Pre-Install)
Frequency Range (-10dB) ¹	44Hz ⁶ - 30kHz
Frequency Response (+/- 3dB) ¹	59Hz - 25kHz
System Sensitivity (1W @ 1m) ²	92dB
Nominal Coverage Angle (-6dB)	90°
Directivity Index (dB) ⁵	7.5
POWER HANDLING³	
Average	90W
Programme	180W
Peak	360W
Recommended Amplifier Power	180W @ 8 ohms
Nominal Impedance	8 Ohms
Transformer Taps- via rotary selector switch 70/100V	60W, 30W, 15W (7.5W 70V) & Low Z operation
RATED MAXIMUM SPL⁴	
Average	112dB
Peak	118dB
With Max. Transformer Tap - Average	110dB
TRANSDUCERS	
Low Frequency	8" (200mm) Bass/Mid, mineral loaded polypropylene
High Frequency	1" (25mm) titanium dome with neodymium magnet system, Ferrofluid cooled

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AUDIO SPECIFICATIONS / PERFORMANCE

ENCLOSURE

Backcan (FC-8TPIC)	Powder Coated Steel (Black)
Baffle (FC-8DRV)	High Impact ABS UL-V0 (Black)
Grille	Steel, weather resistant coating (White)
Safety Features	Safety ring for load bearing safety bond
Clamping design	SafetyFirst™ with locking dog legs Min/Max Clamping Range - 0.33"-2.00" (8.38mm-50.8mm)
Cable Entry Options	Cable clamp & squeeze connector for conduit up to 0.87" (22 mm)
Input Connection	Removable locking Euroblock connector with screw terminals & loop through facility
Conduit Knockouts on PI Back Can	5 locations - 0.5/0.75/0.87/1.10" (12.7/19/22/28mm)
Safety Agency Rating	UL1480A, UL2043, CE Suitable for Use in Air Handling Spaces per NFPA90 and NFPA70.
Ingress Protection	IP44
Operating Temperature	-40°F to 140°F (-40° C to 60° C)
Environmental Testing	Salt Spray
Cutout Diameter	Ø 11.57" (294mm)
Bezel diameter	Ø 12.75" (323.9mm)
Grille Diameter	Ø 13.07" (332mm)
Rear of ceiling to rear of back can	6.02" (153mm)
Rear of ceiling to top of safety loop	6.83" (173.5mm)
Included Accessories	Cut-out template, round white grille
Optional Accessories	Plaster (mud) ring, round black grill, square white grill, square black grill, tile bridge kit
Packed Quantity	1
Shipping Dimensions (HxWxD) - FC-8DRV	8.7" x 16.4" x 16.4" (22cm x 41.5cm x 41.5cm)
Shipping Dimensions (HxWxD) - FC-8PIC	9.5" x 18.9" x 18.9" (24cm x 48cm x 48cm)
Net Weight (per unit) - FC-8DRV	7.1 lbs (3.2kg)
Net Weight (per unit) - FC-8PIC	12.7 lbs (5.8kg)
Shipping Weight - FC-8DRV	11.4 lbs (5.2 kg)
Shipping Weight - FC-8PIC	17.8 lbs (8.1kg)

Notes:

- 1 - Average over stated bandwidth, full space, IEC Baffle
- 2 - Unweighted pink noise input, measured at 1 meter on axis
- 3 - Long term power handling capacity as defined in EIA - 426B test

- 4 - Calculated from rated noise power and sensitivity
- 5 - 1k-10 k Hz average
- 6 - Recommended High-Pass (24dB/Oct)

A full range of measurements, performance data, Ease™ and CLF Data can be downloaded from www.atlasied.com.

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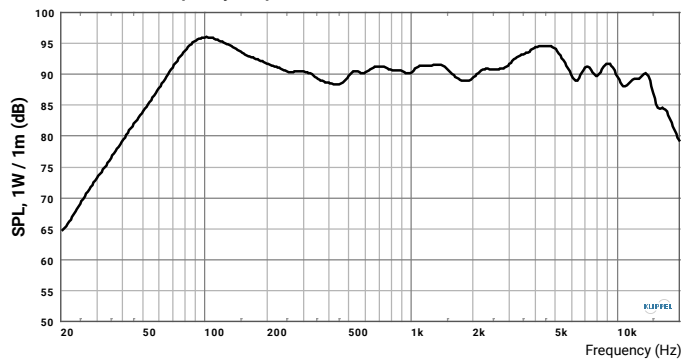


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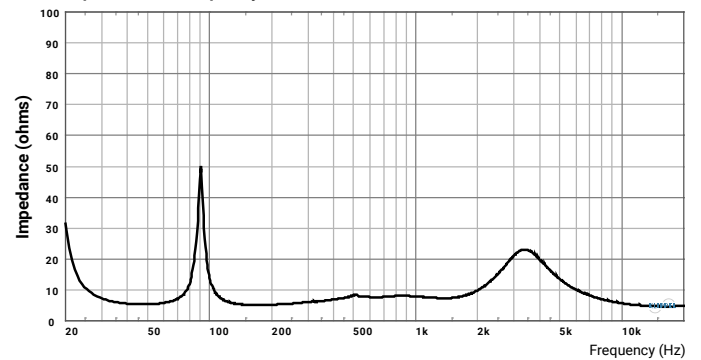
PERFORMANCE MEASUREMENTS



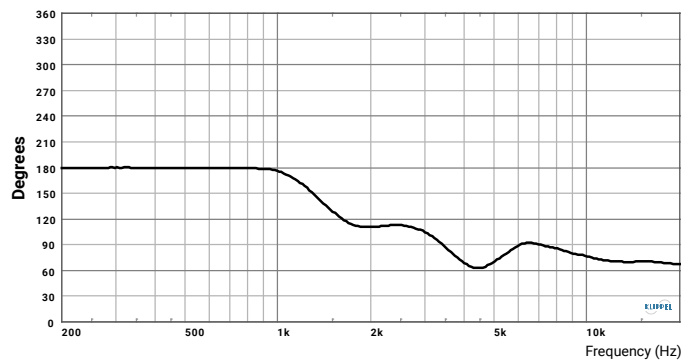
1m On-axis Frequency Response



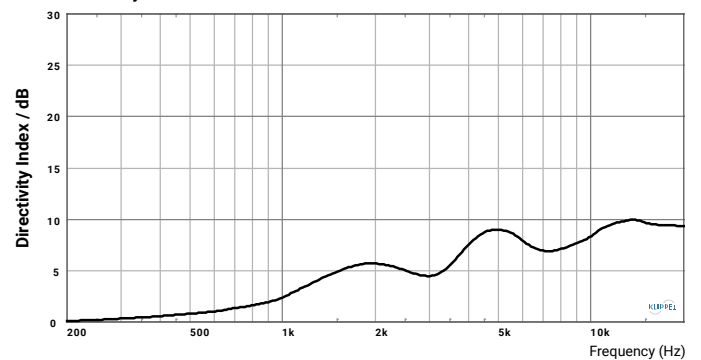
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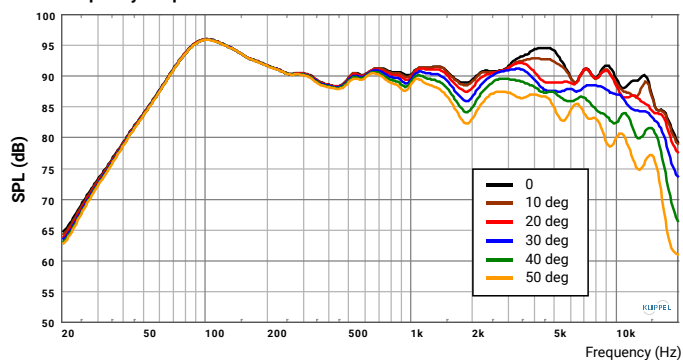
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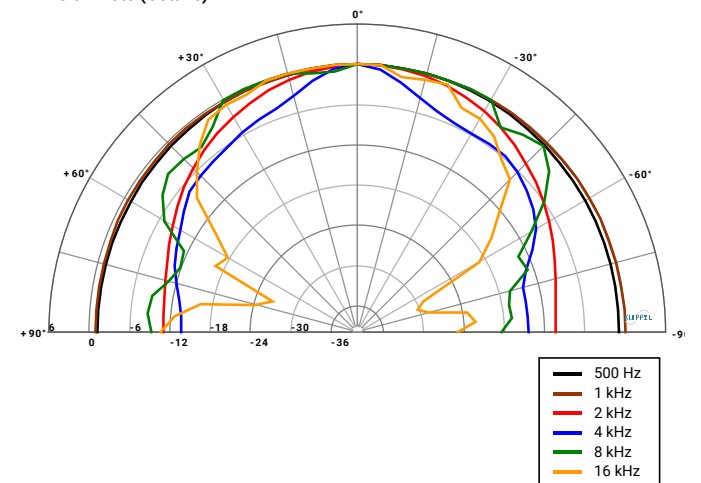
Directivity Index



Frequency Response



Polar Plots (Octave)



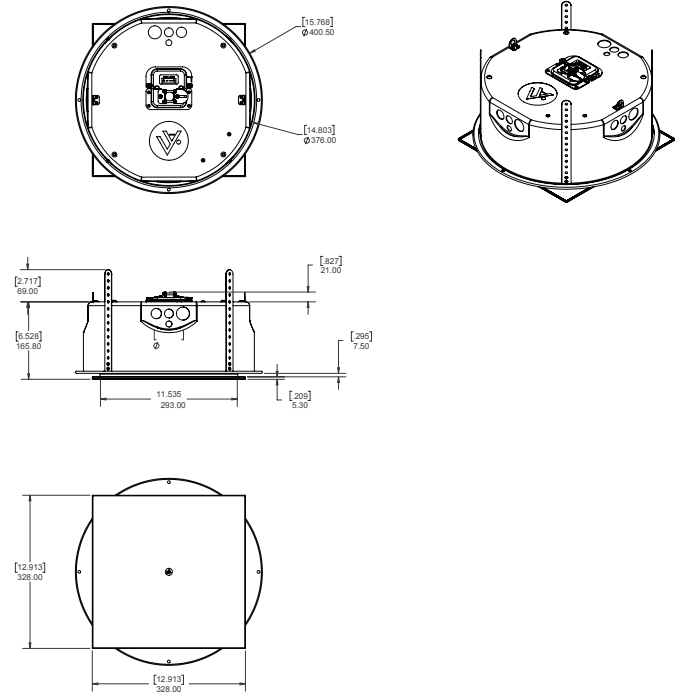
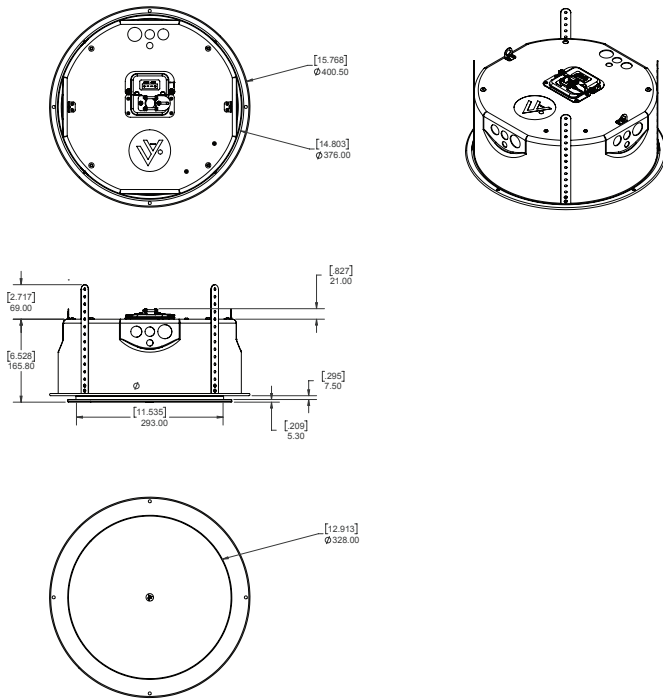
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DIMENSIONAL DRAWINGS



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ARCHITECT AND ENGINEER SPECS

The loudspeaker shall be of a two-way flush-mount design with an internal passive crossover and a 60W low insertion loss 70/100V transformer for use in constant voltage distributed lines. An 8-inch mineral loaded polypropylene woofer with butyl rubber surround and 1" (25mm) titanium dome with Ferrofluid cooled neodymium magnet system, shall be housed in a proprietary injection molded ABS UL94V-0, UV fade resistant vented baffle. For pre-wiring the PI (pre-install) back can is provided with conduit knockouts in 5 locations 0.5/0.75/0.87/1.10" (12.7/19/22/28mm). The backcan shall be of powder coated steel construction. A recessed termination box shall be integrated with the back can, a removable connector with screw terminals for secure wire termination with "loop through" facility shall be provided. Strain relief will be provided by a clamping mechanism for use with plenum rated cable or conduit. The loudspeaker shall incorporate a toolless high travel dog-leg mechanism. It shall utilize a one-piece bezel-less grille and an optional square grille if required.

The loudspeaker shall comply with the following safety standards; UL1480A, UL2043, CE.

The loudspeaker shall meet the following performance specifications: On-axis system frequency range shall be 44 Hz to 30 kHz (-10 dB). The broadband sensitivity shall be 92 dB (2.83 V at 1m) SPL in full-space environment with recommended high-pass protection. The long-term power handling rating shall be 90W as defined in EIA-426B. The maximum continuous output shall be 112 dB SPL and the maximum peak output shall be 118 dB SPL. The nominal coverage pattern shall be 90 degrees conical. The transformer shall have power taps 60W, 30W, 15W, 7.5W (3.8W 70V), plus an 8-ohm bypass, selectable using a rotary switch located on the front baffle. The loudspeaker Euroblock input connections shall allow for direct connection to 70-volt, 100-volt, or low-impedance amplifiers.

The loudspeaker grille diameter shall be 13.07" (332mm), 6.83" (173.5mm) deep (to top of safety loop). The unit net weight shall be, FC-8DRV - 7.1 lbs (3.2kg), and FC-8PIC - 12.7 lbs (5.8kg)

The warranty shall be 5 years. The loudspeaker shall be the Atlas + Fyne FC-8TPI.