

SHS-6T2

Strategically Hidden Speaker



Features

- 70.7V/100V and 4Ω Operation
- Concealed Two-Way Transducer Design
- Adaptive Dispersion Lens Provides Uniform Wide Audience Coverage
- Sealed Enclosure Design Provides Optimal Bass Response
- Built-In Tile Rail Arms That Mechanically Expand From the Enclosure
- Optional Factory Color Match Via AtlasIED Print Service

Applications

In today's commercial building designs, architects rank aesthetics more important than performance. For ceiling loudspeakers, great sound is a requirement, but the designers also want the speakers to be out of sight and out of mind. AtlasIED's Strategically Hidden Loudspeaker is the first solution of its kind that addresses the aesthetics of the loudspeaker in the ceiling along with delivering exceptional sound quality. The SHS can be deployed in paging, background music, or sound masking applications in a variety of installation types.

General Description

The SHS-6T2 is comprised of a two-way driver inside a concealed enclosure providing high-definition sound. The sealed enclosure is tuned for deep bass performance. This hidden driver will amaze listeners who are shocked by the sound level coming from what is virtually unseen. The transducer is attached to the SHS's tunnel waveguide to take the sound performance to the next level. As the sound exits the waveguide, it travels through the patented adaptive dispersion lens that acts as a phase plug. The acoustic result is all frequencies are radiated evenly and annoying "hot spots" that are found directly below the loudspeakers are minimized. This makes the SHS not only a great solution for sound and music reinforcement, but also a great sound masking loudspeaker as well.

The SHS ships with the ability to utilize the Adaptive Dispersion Lens in three different configurations for various applications. Sound masking installations and installations with low ceilings (less than 10') should use the 4mm dispersion lens with solid panel attached. Installations with ceilings between 10' and 14' should use the 8mm dispersion lens with the solid panel attached. Installations with ceiling heights above 14' or in applications that require maximum intelligibility, the 4mm direct fire lens should be used with the perforated panel attached.

The concealed design is achieved using a patented 3" diameter dispersion lens with a micro trim ring. Once installed, the visual appearance is minimized to the size of a high-end ceiling sprinkler head.

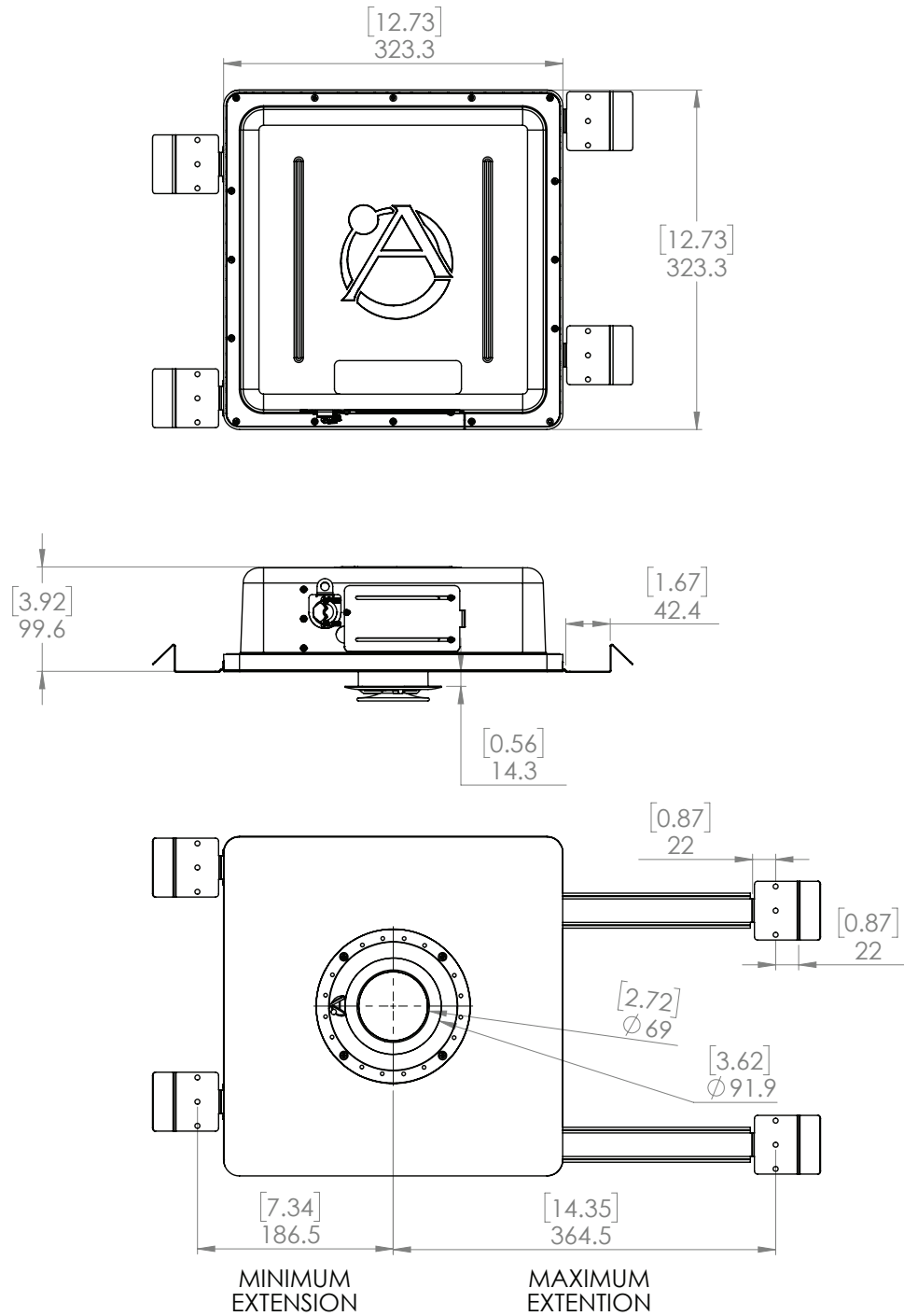
The SHS can become a true chameleon via AtlasIED's custom match process. AtlasIED offers custom color matching via UV printer that enables an integrator to submit an image or sample of the ceiling, then, using a state-of-the-art print service, a custom lens and trim ring that matches the submitted sample will be shipped to the customer.

The SHS is also an installer's dream with its integrated rail system. All the parts are built into the enclosure including the tile rails, with no rail screws required for installation. Once the four rails are pulled out from the enclosure it is ready for installation. An installer only needs to drill a three-inch hole into the ceiling tile, set the product through the hole, and snap on the adaptive dispersion lens.

System	
Type	4.5" 2-Way
Operation Mode	Non-Powered Passive
Operating Range (-10db)	80 Hz - 12 kHz
Frequency Response (+/- 5dB)	100 Hz - 15 kHz With DSP Correction (86 dB)
Vertical Coverage:	130 Degrees, 2 kHz Octave Band
Horizontal Coverage:	130 Degrees, 2 kHz Octave Band
Max Input Ratings (4Ω)	75W Continuous
Transformer Taps - 70V	32W, 16W, 8W, 4W and Low Impedance
Transformer Taps - 100V	32W, 16W, 8W
Directivity Factor (Q)	4.3 @ 2 KHz (8mm Diffuser) 1.6 @ 2 KHz (Open Mesh Diffuser)
Directivity Factor (DI)	6.4 @ 2 KHz (8mm Diffuser) 2.1 @ 2 KHz (Open Mesh Diffuser)
Input Sensitivity at 1W/1m	90.5dB SPL
Max SPL at 1m (passive)	103dB
Recommended Signal Processing	7 Band Peq Correction
Recommended Power Amplification	120 W @ 8 Ohms
Transducers	
LF Transducer Qty and Size	4.5"
LF Voice Coil Size	1"
MF Transducer Qty and Size	N/A
MF Voice Coil Size	N/A
HF Transducer Qty and Size	20mm
HF Voice Coil Size	20mm
Maximum Output	101dB
Nominal Impedance	6 Ohms
Minimum Impedance	4.8 Ohms
Crossover Frequency	3 kHz
Driver Protection	NA
Enclosure	
Color	Gray
Enclosure Material	Steel
Grille Material	N/A
Baffle Material	Low Smoke Abs
Mount Material	Steel Tile Bridge Arms
Input Connection	4 Pole Euro Block
Controls	Rotary Switch
Mounting/Rigging Provisions	Included Tile Bridge
Safety Features	1 Safety Hangpoint
Safety Agency Ratings	UL1480A & UL2043, CSA C22.2 No. 205-17
Ingress Protection	IP20
Environmental Testing	N/A
Cutout Diameter	2.75" Hole
Logo	N/A
Product Dimensions (H x W x D)	12.73" (323.3mm) x 12.73" (323.3mm) x 3.92" (99.6mm)
Shipping Dimensions (H x W x D)	15.74" (400mm) x 21.46" (545mm) x 6.5" (165mm)
Net Weight - lbs	12.85 lbs / 5.83 kg
Shipping Weight - lbs	10.35 lbs / 4.69 kg
Warranty Coverage	
Warranty Period	5 Years

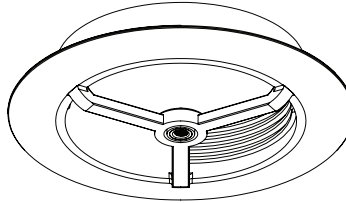
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Dimensional Drawings

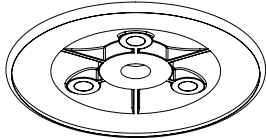


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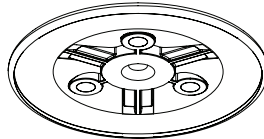
Included Accessories



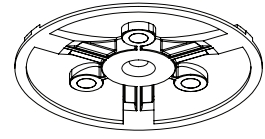
Flange



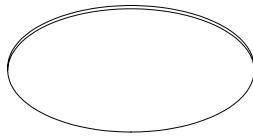
Standard Lens (8mm)



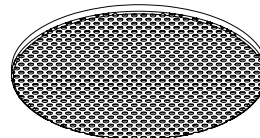
Standard Lens (4mm)



Direct Fire Lens (4mm)

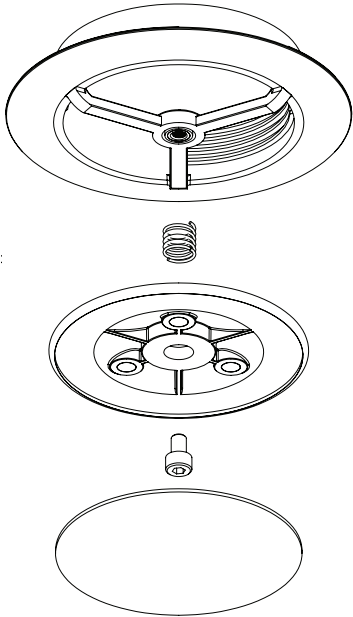


Lens Cover

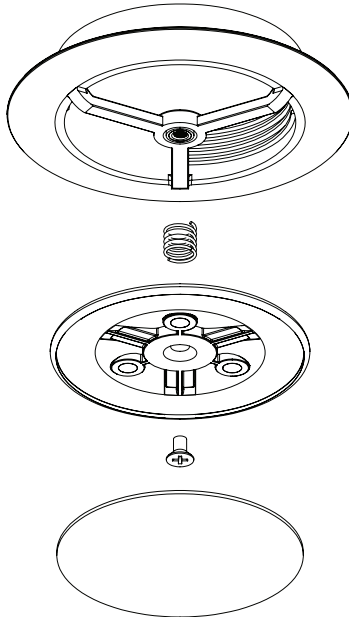


Direct Fire Grille

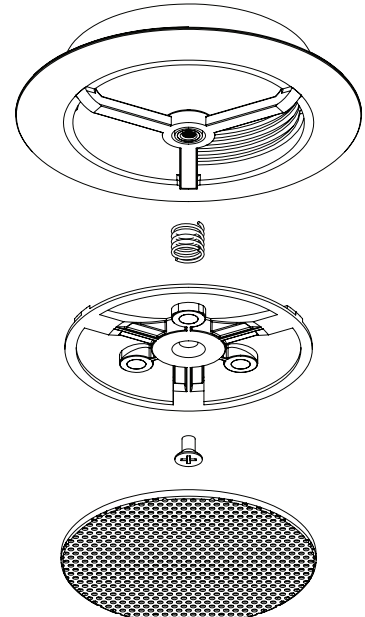
Installation Configurations



Standard Lens (8mm) with Solid Lens Cover
Ideal for Medium Ceiling Installations
(10' - 14')



Standard Lens (4mm) with Solid Lens Cover
Ideal for Low Ceiling Installations (>10')
and Sound Masking Applications



Direct Fire Lens (4mm) with Direct Fire Grille
Ideal for Installations with High Ceilings (<14')
or Applications Where Extreme Intelligibility
is Required

Use the included spring to increase the diffuser open area.

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Architect and Engineer Specifications

The loudspeaker system shall be AtlasIED SHS-6T2. The passive, non-powered loudspeaker system shall include a high performance two-way driver inside a concealed enclosure providing high-definition sound. The sealed enclosure shall be tuned for bass performance while maintaining an installed visual presence similar to a sprinkler head. The transducer shall be attached to a tunnel waveguide and patented 3" adaptive dispersion lens that acts as a phase plug. The acoustic result shall produce frequencies evenly, significantly reducing hot spots directly below the loudspeaker. Frequency response for the system shall be 100Hz – 15kHz (with DSP correction). Sensitivity shall be 86dB average (1W @1m). Vertical and Horizontal Coverage shall be 130 degrees @2kHz Octave Band using the 4mm dispersion lens and solid disc attached.

Loudspeaker shall be comprised of a 4.5" two-way cone type driver. Cone shall be constructed of composite cone with polymer coated cloth surround. The 20mm tweeter shall be a silk dome. Magnet shall be a minimum of 10oz (264g) and the voice coil diameter shall be 1" (25mm). Transformer shall be a 70.7V / 100V type with 4, 8, 16, and 32 watt primary taps (@70.7V) with a rotary tap selector switch to include transformer bypass setting for low impedance direct coupled operation.

The enclosure shall be a deep drawn steel enclosure design 12.73"W x 12.3"L x 3.92"D overall dimensions. To facilitate connection in conduit systems, enclosure shall be equipped with an access panel covering a recessed terminal area. This cover shall provide a side access compression fitting / strain relief to facilitate flexible conduit up to 22mm outside diameter or 1" (25mm inside diameter) conduit when the compression fitting is removed.

External wiring shall be accomplished via a removable lockable wiring connector with screw-down terminals to provide both secure wire termination and pre-wiring capability before loudspeaker installation. The 4-pole locking connector shall facilitate in / out connections and shall be located in the recessed area behind the conduit access panel.

The enclosure shall include an integrated adjustable "no-screws" tile rail system for use on either 2' x 4' (609mm x 1219mm) or 2' x 2' (609mm x 609mm) suspended ceiling tiles. For safety, the assembly shall have one hang point. Installation shall require a 2.75" cutout in the ceiling tile to accommodate the SHS through hole and then the adaptive lens is snapped into place on the front of the tile.

The loudspeaker shall be the AtlasIED SHS-6T2.