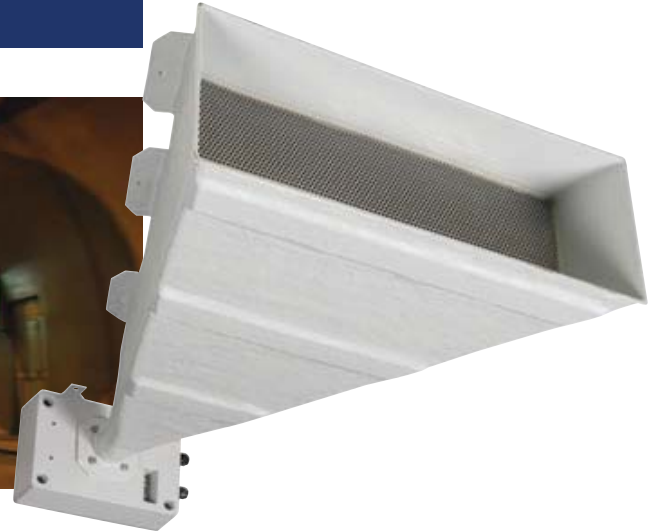




LCS70T

Industrial Low Ceiling Horn



LCS70T Features

- Boundary effect, low-spill.
- Increased repeating distance.
- Long-horn, straight patterns.
- 2-inch compression driver.
- High-SPL.
- High-directivity.
- High intelligibility (STIPA).
- SPL: 104 dBa @ 20 m.

LCS70T / Industrial Low Ceiling Horn

The LCS70T is one of the latest products from ATEIS and especially designed for the voice-evacuation market. The LCS70T is a typical exponential horn that is designed to be used in placed with restricted ceiling heights and where far throws are requested.

The LCS70T is made of reinforced fibre/epoxy and equipped with a strong and powerful 2" compression driver, capable of producing a fabulous 117 dB. The shape and structure allow for use in highly demanding environments like traffic tunnels and car parks. Also train tubes that need to be addressed during voice-evacuations are typical examples where the LCS70T would fit perfectly.

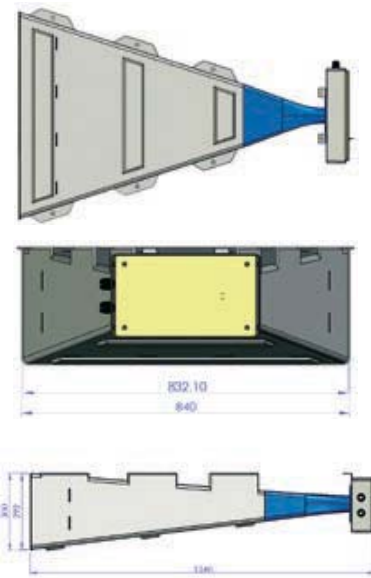
output level and evenness of frequency response, and is what makes this horn design simple and effective.

The LCS70T should be fixed against a large and flat surface that acts as a waveguide and mirror. The small horizontal opening angle of only 30 degrees guarantees that the sound will stay unaffected by lateral distortion and so will increase the in-between distance of the horns.

Due to its dimensions, its throw can reach from 40 up to 70 m, reducing amplifiers and delay lines when compared to conventional distributed sound systems for tunnels. This will bring the total costs down and due to a lower number of horns, it will bring the Q-factor up and so the intelligibility of the overall evacuation system.

The LCS70T has an extended frequency range that runs up to 8 kHz allowing for high-fidelity speech messages in situation where the acoustics are limited and therefore the demands on the soundsystem high. Highly directional horns will result in a bigger in between, repeating distance, reduced soundpoints and so reduced number of amplifiers and delay-lines and so, resulting in a better overall price performance.

The LCS70T is a typical symmetrical exponential horn (= where the horn length is exponentially related to the horn area) that uses the mounting surface as wave guide. This way a "half cell" construction can be used, reducing its mouth height that is important when used in environment with height restrictions. Once in the proper band pass region for a given size, an exponential horn presents a fairly consistent acoustical load to its driver. This helps both



Mechanical drawing with 8 x 12 mm fixation holes and vertical-ribs for extra stability



LCS70T

Polar Plots

LCS70T CHARACTERISTICS

ELECTRICAL SPECIFICATIONS

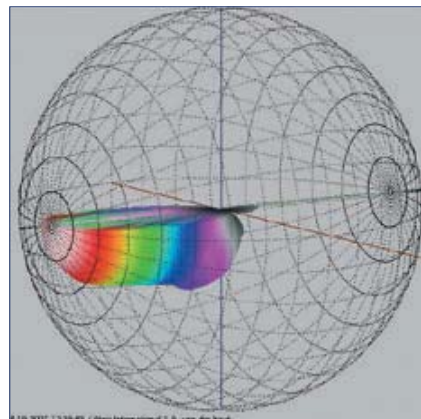
- 100/70/50 Volt line transformer maximum power: 70 Watt rms - Dual ceramic connector blocks with M20 PG12 glands.
- Electrical performance SPL-MAX: 132 dBA @ 70 Watt.
- Frequency range: 300 Hz – 8 kHz.
- Horizontal opening angle @ 1 kHz: 15 degrees.
- Sensitivity 1 W / 1 M:

112 dB @ 500 Hz
120 dB @ 1 kHz
116 dB @ 2 KHz
108 dB @ 8 KHz
- Q-factor @ 1 kHz:

250 Hz	= 7.3
500 Hz	= 14
1 kHz	= 30.5
2 kHz	= 38
4 kHz	= 38
8 kHz	= 38
- External high-pass filter requirements: 250 Hz, 2nd order (filter not included).

MECHANICAL SPECIFICATIONS

- Material: Glass fibre reinforced epoxy flame-retardant polyester.
- IP rating: IP56.
- Color: RAL7004 (dark grey).
- Dimensions: Length: 1340 mm - Width: 840 mm (flare side) - Height: 300 mm.
- Weight: 35 kg approximately.
- Mounting type: 8 x M12 spacings.
- Spay water protection on mouth: Stainless steel mesh grill.



Polar plots 250 Hz, 2 KHz, 4 KHz and A-weight

