Model Q-CS Loudspeaker

For finished low-ceiling applications

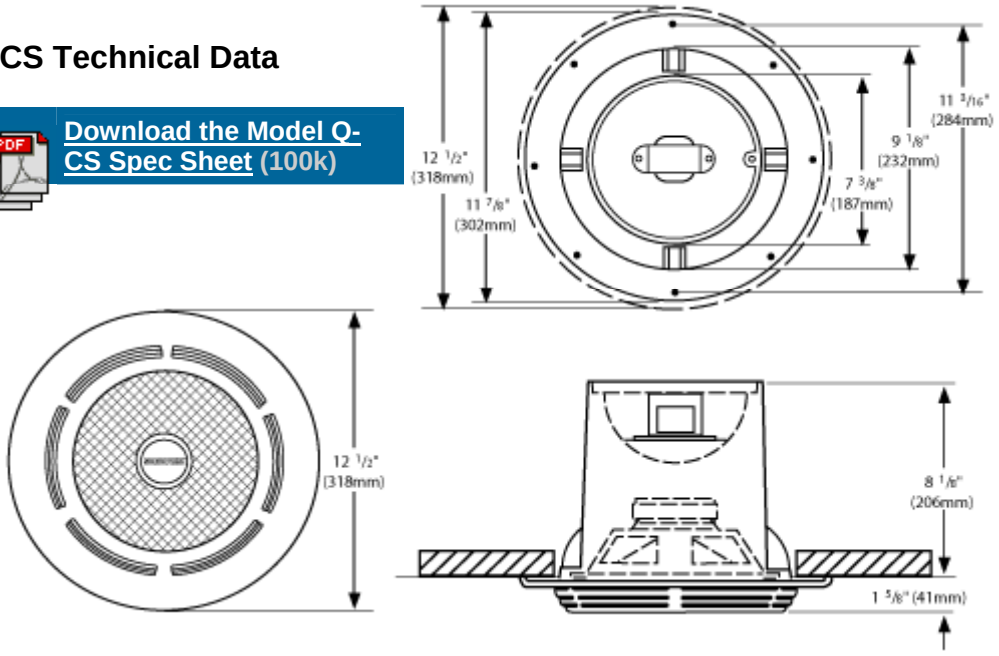
The Q-CS is the most compact Soundsphere loudspeaker, designed for low-ceiling installations requiring clear voice announcements and full-range music reproduction, even at background levels. Applications include office buildings, bars and restaurants, classrooms and retail stores.

With the Q-CS, you will experience superior results while using fewer units than conventional ceiling loudspeakers. These loudspeakers offer a smooth hemispherical coverage pattern, with flat frequency response and high sensitivity (89dB 1W/1m). The Q-CS utilizes Soundsphere's exclusive patent-pending Broadband Linear Excursion Control to provide high sensitivity and accurate, articulate low-frequency performance. Each unit ships fully assembled and uses a standard tile bridge for 8" speakers.

MODEL Q-CS APPLICATIONS:
• Office Buildings
• Restaurants
• Bars & Nightclubs
• Hotel Lobbies
• Courtrooms
• Classrooms
• Retail & Grocery Stores
And other low-ceiling applications where clear voice announcements and full-range music are required.

Q-CS Technical Data

Download the Model Q-CS Spec Sheet (100k)



Q-CS SPECIFICATIONS:	
Sensitivity:	89dB; 1W/1m
Maximum SPL:	101dB; 15W/1m

Power Handling:	15 Watts RMS
Frequency Response:	55Hz to 16kHz ± 4dB
Coverage:	180° vertical 360° horizontal
Available Power Taps:	25V, 70V, 100V 15W, 7.5W, 3.8W, 1.9W, 1W, 0.5W
Weight:	7.25 lbs. (3.3 kg)
Size:	Enclosure: 7-3/8" dia. x 8-1/8" high (187mm x 206mm) Mounting Flange: 11-7/8" dia. (302mm) Grille: 12-1/2" dia. x 1-5/8" high (318mm x 41mm)
Driver:	Coaxial: 8" LF, 1/2" dome HF
Material:	ABS Resin
MODEL Q-CS SAMPLE INSTALLATIONS:	
Retail Showroom	
Video Projection Systems	

How many conventional ceiling loudspeakers can be replaced by one Soundsphere Model Q-CS ceiling loudspeaker?

This question comes up every time the conversation turns to the Model Q-CS. The answer requires some discussion:

The true coverage of conventional ceiling loudspeakers
According to their specification sheets, most "higher-quality" ceiling loudspeakers produce a full-frequency coverage field (-6dB from on-axis) of 60°. Beyond this cone of coverage, mid, mid-high and high frequencies are attenuated. These frequency ranges are crucial to speech intelligibility and perceived "smoothness" of coverage.

Ceiling loudspeaker systems should never be heard
Listeners should never perceive a ceiling sound system. As listeners move around the coverage area, the sound level and frequency response should not change enough to be noticed. Conventional ceiling loudspeakers, when used conventionally, produce full-frequency sound directly under them and only low frequency sound off-axis. A listener moving from an off-axis position to directly under the loudspeaker cannot help but perceive a change in the soundfield.

So, conventional loudspeakers cannot produce a smooth, full-frequency soundfield?
Of course they can. The reason that they never produce such a soundfield is that too many loudspeakers must be used. In the case of the 60° ceiling loudspeaker in an 8' high ceiling, the loudspeakers would have to be spaced 4-1/2' apart to create such an effect. In a 50' x 50' space, this would require 11 rows of 11 speakers, for a total of 121 loudspeakers. Most conventional ceiling loudspeaker manufacturers recommend a spacing of 10' for an 8' high ceiling. In the the 50' x 50' example space, this would require 5 rows of 5, for a total of 25 loudspeakers. The resulting soundfield is what we have all experienced in ceiling loudspeaker systems. We at Soundsphere consider this result unacceptable.

Why is a system using Soundsphere Q-CS loudspeakers so much better?
The Q-CS provides full-frequency response throughout a hemisphere. Therefore, spacing of speakers is based solely on the inverse square law. For a 3dB variation in direct field level at an 8' mounting height, the Q-CS can be spaced 14' apart. In the 50' x 50' example space, this would require 4 rows of 4 speakers, for a total of 16 loudspeakers. With a conventional loudspeaker system, even using 9 more speakers would not produce the same smooth, full-frequency, diffuse soundfield that the Q-CS system does. If you really want to compare apples to apples, it would require 121 conventional ceiling loudspeakers with equalization (to reduce the low-frequency output) to equal the performance of 16 Soundsphere Q-CS loudspeakers