

EdgeMax™ EM90

in-ceiling premium loudspeaker with PhaseGuide® technology

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Product Overview

Bose Professional EdgeMax™ in-ceiling premium loudspeakers feature proprietary Bose PhaseGuide® technology with high-frequency compression drivers to create a new category that combines the room-filling coverage patterns typical of larger surface-mount speakers with the architect-preferred aesthetics of in-ceiling models. Designed to mount near wall-ceiling boundaries, EdgeMax™ loudspeakers provide improved audio quality and coverage, while reducing the number of required units, compared to conventional dome-tweeter ceiling speakers.

Key Features

- **PhaseGuide technology** – provides unique asymmetrical vertical pattern for room-filling coverage when mounting near wall-ceiling boundary
- **Provides improved room visual appearance** – for demanding interior designs by eliminating center-of-ceiling or wall-mounted loudspeakers
- **Nominal 90° horizontal coverage** – designed for in-ceiling mounting near room corners
- **High-frequency compression driver** – for best-in-class audio quality with superior frequency response and coverage consistency versus typical dome tweeters
- **8-inch woofer** – with wall-boundary loading provides extended bass impact
- **2-way passive crossover with 70/100V transformer**
- **New auto-hold, spring-loaded mounting arms** – for fast, easy installs
- **Magnetically attached grill** – for quick access to wiring and tap settings
- **UL1480A listing** – for air-handling (plenum) space installation



Technical Specifications

SINGLE MODULE PERFORMANCE		
Frequency Response (-3 dB) ⁽¹⁾	70 - 16,000 Hz	
Frequency Range (-10 dB)	60 - 18,000 Hz	
Nominal Coverage Pattern	90° H x asymmetrical 75° V (-90° to -15° referenced to ceiling)	
	Bose extended-lifecycle test ⁽⁴⁾	AES transducer test ⁽⁵⁾
Power Handling, long-term continuous	125 W	150 W
Power Handling, peak	500 W	600 W
Sensitivity (SPL/ 1W @ 1 m) ⁽²⁾	97 dB	97 dB
Calculated Maximum SPL @ 1 m ⁽³⁾	118 dB	119 dB
Calculated Maximum SPL @ 1 m, peak	124 dB	125 dB
Crossover	1.0 kHz (passive 2-way crossover with integrated 70/100V transformer)	
Loudspeaker EQ	Recommended but not required	
Recommended high-pass protection	70 Hz with minimum 12-dB / octave filter	
Overload protection	Resistor-network power reduction with automatic reset	
Transformer taps	70V: 2.5, 5, 10, 20, 40, 80 W, bypass / 100V: 5, 10, 20, 40, 80 W, bypass	
TRANSDUCERS		
Low Frequency	1x 8-inch woofer (1.5-inch voice coil)	
High Frequency	1x compression driver (1.3-inch voice coil)	
Nominal Impedance	8 ohms (transformer bypass)	
PHYSICAL		
Enclosure Material	Engineered-plastics front baffle with integrated steel formed enclosure	
Grille	Micro perforated steel, powder-coated finish, white	
Environmental	Indoor only; UL-1480A listed for plenum-space installation	
Connectors	Euro block 6-pin connector with loop-through, front-baffle mounted	
Suspension / mounting	Four (4) auto-hold, spring-loaded mounting arms plus four (4) M6 safety cable tabs	
Maximum ceiling thickness	80 mm (3.2")	
Dimensions (H x W x D)	339 x 339 x 249 mm (13.4" L x 13.4" W x 9.8" D) enclosure	
	390 x 390 x 13 mm (15.4" L x 15.4" W x 0.5" D) grille flange, as mounted	
Ceiling cutout and clearance	345 x 345mm (13.6" L x 13.6" W) with 236 mm (9.3") mounting depth	
Net Weight	10.1 kg (22.2 lbs) with grille	
Shipping Weight	12.5 kg (29 lbs)	
Accessories	Black grille, rough-in pan for new construction	

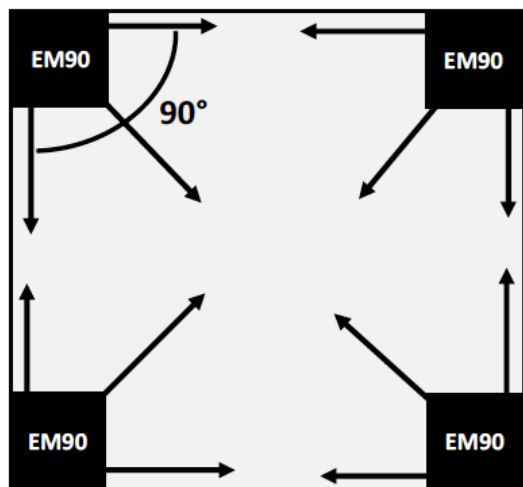
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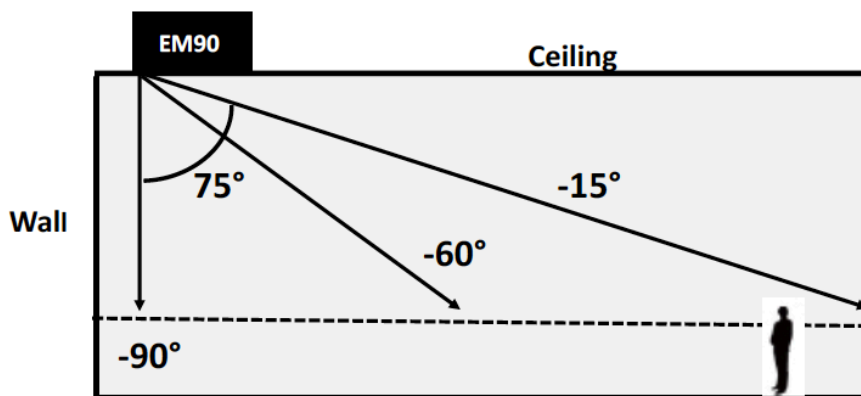
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Nominal Coverage and Room Placement

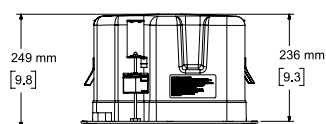


Room Placement Top View

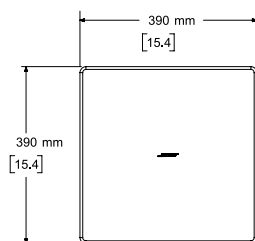
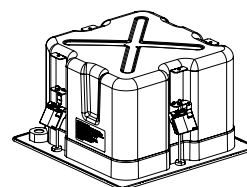


Vertical Coverage Side View

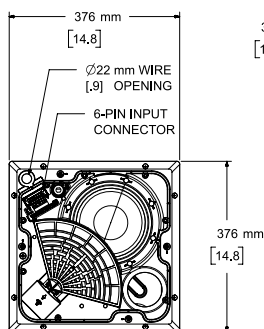
Dimensions



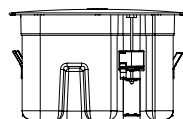
Top View



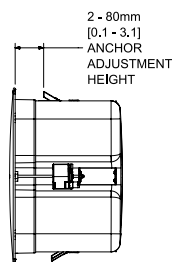
Front View



Front View
(Grille Removed)

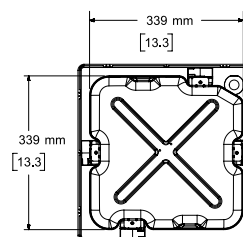


Bottom View



Side View

DIMENSIONS APPLY TO BOTH SIDES



Rear View

NOTES:

1. WEIGHT IS APPROX. 10.0kg [22.0 lbs]
2. DIMENSIONS ARE IN MILLIMETERS OVER INCHES

Footnotes

- (1) Frequency response and range measured on-axis in eighth-space (corner loaded) environment with recommended EQ
- (2) Sensitivity measured on-axis in eighth-space (corner loaded) environment with recommended EQ
- (3) Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression
- (4) Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6-dB crest factor, 500-hour duration
- (5) AES standard 2-hour duration with IEC system noise