



INTRODUCTION

Thank you for purchasing Sonance Symphony® in-ceiling speakers. When properly installed, these speakers will give you many years of entertainment pleasure. To get the most out of your new speakers, please read this manual thoroughly before you begin installation.

Since all of the Sonance Symphony in-ceiling speakers have the same exact footprint and have identical installation requirements, the directions in this manual apply to each model. This manual covers the following speaker models:

- Symphony S625TR
- Symphony S622TR
- Symphony S624TR
- Symphony S621TR
- Symphony S623TR
- Symphony SRS1

To achieve the best performance, Sonance recommends that these speakers be installed by a Sonance Authorized Dealer/Installer.

PARTS LIST

Your Sonance Symphony in-ceiling speakers include the following:

- (2) Sonance Symphony Speakers
- (2) Paintable Grilles
- (2) Plastic paint plugs to protect speakers during painting
- (1) Mounting cutout template (in packaging)

OPTIONAL ACCESSORIES

Symphony FlexBracket (part# 92092) and **Symphony Staple Template** (part# 901049) — Plastic templates to reserve a mounting hole for the speaker in new construction. Designed to be used with the RotoLock® mounting system.

Symphony Coverplate (part# 92094) — Covers the hole made by the FlexBracket during construction until the speaker is installed.

Symphony Retrofit Enclosure (part# 92098) — Molded enclosure that reduces sound transmission into adjacent rooms and spaces. Can be used in installations where the speaker is retrofitted into existing walls.

Sonafill® In-Ceiling System (part# 91928) — Retrofittable acoustical treatment for in-wall speakers consisting of two pillows and four tiles that virtually eliminates noises produced by resonating drywall. Dramatically improves midbass sound quality and reduces sound transmission into adjacent rooms.

Symphony Acoustic Enclosure (part# 91688) — ½” MDF enclosure that provides ideal acoustic performance and maximum reduction of sound transmission into adjacent spaces. Designed for use only in new construction.

Fire-Rated Back Can (part# 91906) — Meets ASTM E 119, CAN/ULC S 101, NFPA 251, UBC 7-1 and UL 263 criteria for commercial installations.

SPEAKER PLACEMENT

The locations of the speakers should be determined by considering your primary listening location, the primary use for the speakers (distributed audio, 2-channel or home theater) and aesthetic values. For optimum results contact your Authorized Sonance Dealer for advice.

Distributed Audio Placement (Mono Signal)

Sonance Symphony in-ceiling speakers have very smooth and predictable off-axis response, increasing placement options while providing excellent coverage in distributed audio systems. The chart at the top of the next column shows how far apart the speakers can be

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SONANCE SYMPHONY® SERIES 6.5” IN-CEILING SPEAKER

placed while still providing good coverage. The distances are based on ear heights of 62” for standing listeners and 40” for seated listeners.

Speaker spacing in feet for a distributed audio system

	Standing Listener	Seated Listener
8-foot ceiling	5.7'	9.5'
10-foot ceiling	9.7'	13.5'
12-foot ceiling	13.7'	17.5'
14-foot ceiling	17.7'	21.5'

Home Theater Placement

Left, Center and Right Speakers

- Place the left, center and right speakers from 1 foot to 2 feet in front of the video screen, anywhere from 6 feet to 10 feet apart, with the center channel speaker as close to midway between the left and right speakers as possible.
- Place the left & right speakers at least 2 to 3 feet away from the side walls.
- The main listening position should be between 4 and 10 feet away from the speakers.

Left & Right Surround Speakers (5.1-Channel System)

Locate the left and right surround speakers on the ceiling between 2 feet and 6 feet behind the listening position. The speakers should be between 6 feet and 10 feet apart. Since the surround speakers are usually called-upon to create diffuse effects like the sound of wind or rain, they can be located close to walls without adversely affecting sound quality.

Use Illustration 1 as a guide.

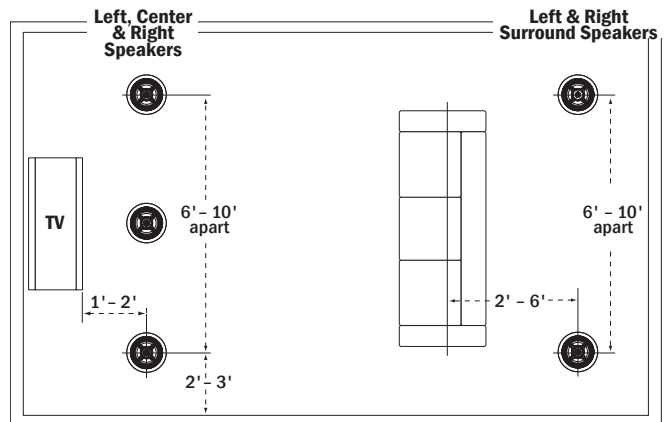


Illustration 1: 5.1-Channel Home Theater Placement

Left & Right Surround and Surround Back Speakers (7.1-Channel System)

- **Left & Right Surround Speakers:** In a 7.1-channel system, place the left and right surround speakers directly to the sides of the listening position, between 6 feet and 10 feet apart. The speakers can be placed close to the side walls.
- **Surround Back Speakers:** Place the surround back speakers between 2 feet and 6 feet behind the listening position. The surround back speakers should be closer together than the left and right surround



speakers — between 3 feet and 6 feet apart. Like the left and right surround speakers, the surround back speakers can be located close to walls without adversely affecting sound quality.

Use Illustration 2 as a guide.

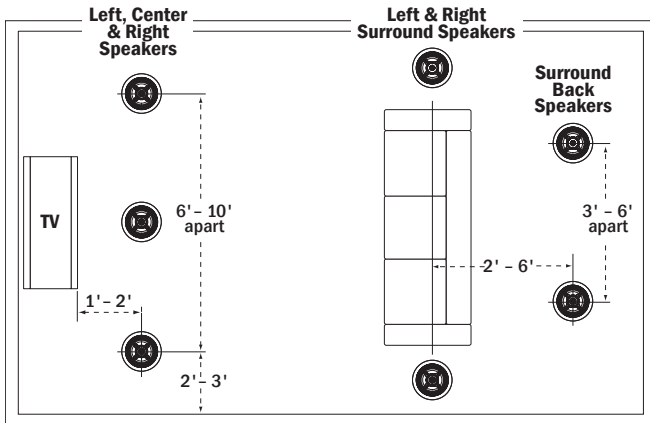


Illustration 2: 7.1-Channel Home Theater Placement

2-Channel Placement

Follow the directions for Home Theater Placement for the left and right speakers.

WIRE GAUGE

Extra resistance in the speaker wire can make a speaker sound less dynamic and reduce definition of the bass frequencies. In extreme cases, it can even attenuate high frequencies. Also, amplifier power is wasted in wire with extra resistance, reducing your system's maximum output level.

To prevent degrading sound quality, the total wire resistance should be less than 10% of the speaker's impedance. This means that for an 8-ohm speaker, the total resistance of the wire should be less than 0.8 ohms.

Refer to the following table when selecting the proper wire gauge for your system:

Wire resistance in Ohms vs. length of cable run						
Distance in Feet	50'	100'	150'	200'	250'	300'
20 gauge	1.04	2.07	3.11	4.14	5.18	6.22
18 gauge	.65	1.30	1.96	2.61	3.26	3.91
16 gauge	.41	.82	1.22	1.63	2.04	2.45
14 gauge	.26	.52	.77	1.03	1.29	1.55
12 gauge	.16	.32	.49	.65	.81	.97
10 gauge	.10	.20	.31	.41	.51	.61

PREPARING THE INSTALLATION LOCATION

All Sonance speakers are designed to be relatively insensitive to variations in enclosure volume. To achieve the ultimate performance from your speakers, a section of the ceiling bay can be sectioned-off to form a back box. Building such an enclosure will create a dramatic improvement in bass performance and power handling.

Ideal back box volume requirements:

Symphony S625 _{TR}	1.5 ft ³
Symphony S624 _{TR}	1.5 ft ³
Symphony S623 _{TR}	1.5 ft ³
Symphony S622 _{TR}	1.2 ft ³
Symphony S621 _{TR}	1.0 ft ³
Symphony SRS1	1.0 ft ³

Insulating the Ceiling Cavity

To reduce sound transmission to adjacent rooms and further improve speaker performance, insulate the ceiling cavity by inserting a sheet of unfaced fiberglass insulation above and below the speaker.

To reduce noise produced by unsupported drywall, install fiberglass insulation in the ceiling bays adjacent to the speaker location.

Symphony Retrofit Enclosures

For installations where it isn't possible to section-off the ceiling bay to form a back box (such as when you're retrofitting the speakers into an existing ceiling), you can effectively reduce sound transmission to adjacent rooms by fitting the speakers with optional Symphony Retrofit Enclosures (part# 92098). This enclosure is designed specifically to be used with Symphony speakers, and will noticeably reduce sound "spillover" from the rear of the speakers into adjacent rooms and spaces.

INSTALLING THE SPEAKERS

New Construction

For installations in new construction, Sonance recommends using a Symphony FlexBracket (part#92902) to reserve a location for the speaker. The FlexBracket is nailed or screwed to the studs and serves as a guide for the drywaller so that the speaker hole will be in the desired location once the drywall is installed.

Symphony FlexBrackets are compatible with the RotoLock mounting system (see *Retrofit*, below).

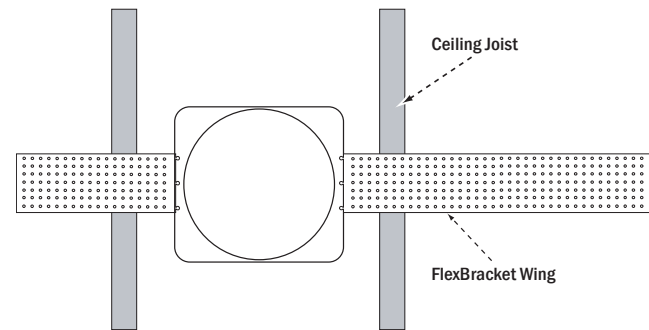


Illustration 4: Symphony FlexBracket Installation

Retrofit

Symphony Speakers feature an integral RotoLock® mounting system for quick mounting directly into existing ceilings and walls. Once the hole is cut and the cable is run, you can install the speaker in a matter of seconds.

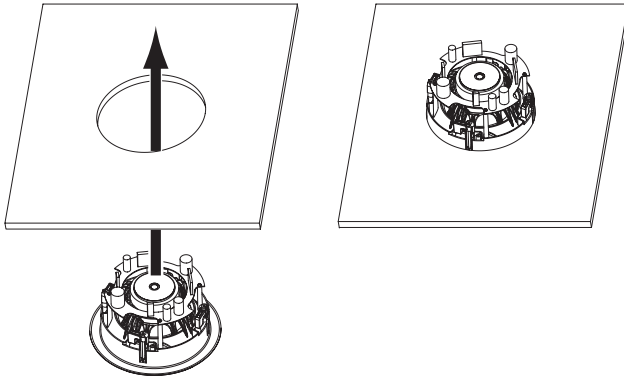
- Determine the location for the speaker (see *Speaker Placement*).
- Perform an obstruction survey to be certain that there are no studs, conduit, pipes, heating ducts or air returns that will interfere with the speaker.
 - The cutout for all Symphony In-Ceiling Speakers is 8⁵/₃₂" (207mm). There also must be at least 5³/₁₆" (132mm) depth within the ceiling cavity for the speaker.
- Find the cutout template provided in the speaker packaging. Position the template where the speaker is to be located and pencil an outline on the ceiling.
 - If you are unsure about obstructions, drill a small hole in the center of the outline and insert a coat hanger wire into the hole to feel-around for possible obstructions.
- Cut the hole using a drywall saw, and run the speaker wires.
- Remove the paint plug from the speaker. Connect the speaker wire to the terminals on the back of the speaker. Double-check that you connected amplifier + to speaker + and amplifier - to speaker -.



7. Make sure all the RotoLock clamps are in the full clockwise position so that they are tucked within the cutout border. Insert the speaker into the hole in the ceiling.

Note: The RotoLock system can accommodate a maximum ceiling material thickness of 1 3/8".

Step 7:



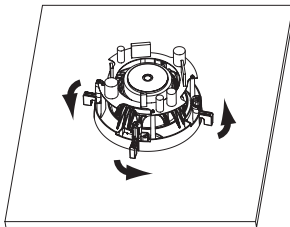
8. Tighten the four screws on the front of the speaker baffle. The RotoLock clamps will automatically rotate into position and begin clamping the speaker.

- When you notice resistance on the four screws the speaker has been clamped successfully.

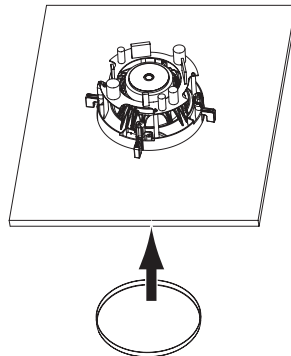
The speaker flange is designed to flex and conform to any small imperfections in the wall surface. Do not tighten the screws so much so that the flange bows-out.

Important: Always use low-torque settings – NEVER over-tighten.

Step 8:



Step 9:



9. Attach the grille after the speaker has been installed. Insert about half of the grille into the groove at the edge of the speaker. Gently fit the remaining half of the grille by working around the speaker, fitting the grille into the groove as you go.

Note: You can adjust the torque applied to the RotoLock screws to achieve a proper grille fit.

PAINING THE SPEAKERS AND GRILLES

You can paint the speakers and grilles before installing them, which will eliminate the “paint scar” if the speaker ever needs to be removed for service. You can also paint the speakers after installation, but before the grilles are attached. All Symphony speakers come from the factory fitted with a plastic ‘paint plug’. Use the paint plug to protect the speaker drivers while the flange is being painted along with the wall.

Sonance always suggests painting the grille separately from the speaker. Before painting, carefully remove the under-grille cloth. It is held in place with a light tacking glue that makes it easy to remove.

Spray the grilles with thinned paint (5 parts thinner to 1 part paint), being careful not to plug the holes. Too heavy a coat of paint on the grille will adversely affect the sound of the speaker.

Once the grilles and flange are painted and dry, replace the under-grille cloth, remove the paint plug from the speaker flange and install the grille.

ADJUSTING YOUR SPEAKERS

Pivoting Woofer and Tweeter

All Symphony In-Ceiling Speakers have a pivoting woofer assembly, and all except the S621_{TR} have a pivoting tweeter. These pivoting drivers allow you to direct sound toward or away from the listening area.

If you’re using the speakers in stereo or as the front L/C/R speakers in a home theater, pivot the woofer and/or tweeter directly towards the listening area. This can be especially helpful if the speakers are widely-separated and the music fails to blend into a central sonic image.

If you’re using the speakers as surround channel speakers in a home theater, you can create a more diffuse, spacious surround effect by aiming the woofers and/or tweeters towards a wall or window, away from the listeners.

To pivot the woofer:

Apply pressure on the outer edge of the tweeter support bracket, as shown in Illustration 5.

Note: Do not touch or apply pressure to the woofer cone.

To pivot the tweeter:

Apply light pressure on the plastic ring around the outside edge of the tweeter dome, as shown in Illustration 5.

Note: Do not touch or apply pressure to the tweeter dome.

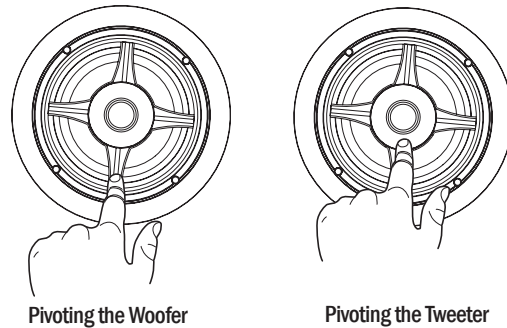


Illustration 5: Pivoting the Woofer and Tweeter

Tweeter Level Control

The Symphony S623_{TR}, S624_{TR} and S625_{TR} have a tweeter level control switch that lets you boost or cut the tweeter’s level by 3dB.

Once you have installed the speakers, listen to a variety of music that you are familiar with. If the music all tends to sound too bright, adjust the level control to the -3dB position. If the music all tends to sound too dull, adjust the level control to the +3dB position. If some recordings sound dull and some sound bright, the speaker is accurately reproducing differences in the recordings, and you should leave the control in the 0dB position.

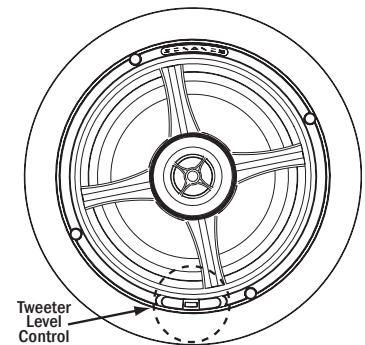


Illustration 6: Tweeter Level Control

TECHNICAL ASSISTANCE AND SERVICE

If you any have questions about the operation or installation of this product, please call our Technical Assistance Department on any business day at (800) 582-0772 or (949) 492-7777; from 7 a.m. to 5 p.m., PST.



If your speakers should need repair or service, contact your Sonance Authorized Dealer for help, or use the following procedure:

1. Prior to calling, note the product's model number, serial number, purchase date, and the name and address of the dealer where you purchased the product.
2. Contact our Technical Assistance Department at the above number(s) and describe the problem the unit is experiencing. If applicable, they will issue a Return Authorization Number.

IMPORTANT: YOU MUST HAVE PRIOR AUTHORIZATION TO RETURN YOUR SPEAKER TO SONANCE!

3. If you're directed to return the unit to Sonance for repair, pack the unit in its original shipping carton. If needed, you can obtain replacement packaging from us for a small charge. Note: it is best if you place the box into an additional outer "overcarton" before shipment to minimize a chance of theft in shipment. Please include a copy of the original bill of sale inside the package.

4. Contact United Parcel Service, Federal Express, or RPS to arrange prepaid (not collect) shipping. Do not use the U.S. Mail Service.

IMPORTANT: FREIGHT COLLECT SHIPMENTS WILL BE REFUSED.

5. Write the Return Authorization Number on the outside of the shipping carton.

6. Ship the packaged unit to:

Quality Assurance Department
Sonance
212 Avenida Fabricante
San Clemente, CA 92672-7531

LIMITED LIFETIME WARRANTY COVERAGE (U.S. ONLY)

Sonance warrants to the original retail purchaser only that this Sonance product will be free from defects in materials and workmanship, provided the speaker was purchased from a Sonance Authorized Dealer.

Defective products must be shipped, together with proof of purchase, prepaid insured to the Authorized Sonance Dealer from whom they were purchased, or to the Sonance factor at the address listed on this instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser. If, upon examination at the Factor or Authorized Sonance Dealer, it is determined that the unit was defective in materials or workmanship at any time during this warranty period, sonance or the Authorized Sonance Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. It is no longer available and can not be repaired effectively, Sonance, at its sole option, may replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Sonance assumes no responsibility or liability for such modification. All replaced parts and product become the property of Sonance. Products replaced or repaired under this warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by Sonance. This Warranty also excludes normal cosmetic deterioration caused by environmental conditions. This Warranty will be void if the Serial Number on the product has been removed, tampered-with or defaced. This Warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will Sonance be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if Sonance or a Authorized Sonance Dealer has been advised of the possibility of such damages, or for any claim by any other party.

Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply. All implied warranties on the product are limited to the duration of this expressed Warranty. Some states do not allow limitation on the length of an implied warranty. If the original retail purchaser resides in such a state, this limitation does not apply.

EXCLUSIONS AND LIMITATIONS

The warranty set forth above is in lieu of all other warranties, express or implied, of merchantability, fitness for a particular purpose, or otherwise. The warranty is limited to Sonance products registered herein and specifically excludes any damage to loudspeakers and other allied or associated equipment which may result for any reason from use with this product. Sonance shall, in no event, be liable for incidental or consequential damages arising from any breach of this warranty or otherwise. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

SPECIFICATIONS

S625TR

Tweeter	1" (25mm) Beryllium Dome, Ferrofluid cooled, pivoting
Woofers	6½" (165mm) Beryllium cone, rubber surround, pivoting
Frequency Response	40Hz – 20kHz ±3dB
Impedance	6 Ohms nominal; 4 Ohms minimum
Power Handling	5 watts minimum; 150 Watts maximum
Sensitivity	90dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	±3dB tweeter level
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	12 lbs. (5.45 KG) Pair

S624TR

Tweeter	1" (25mm) Aluminum dome, Ferrofluid cooled, pivoting
Woofers	6½" (165mm) Coated carbon fiber cone, rubber surround, pivoting
Frequency Response	43Hz – 20kHz ± 3dB
Impedance	6 Ohms nominal; 4 Ohms minimum
Power Handling	5 watts minimum; 140 Watts maximum
Sensitivity	90dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	±3dB tweeter level
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	11 lbs. (5.0 KG) Pair

S623TR

Tweeter	1" (25mm) Silk dome, Ferrofluid cooled, pivoting
Woofers	6½" (165mm) Carbon Fiber cone, rubber surround, pivoting
Frequency Response	43Hz – 20kHz ±3dB
Impedance	8 Ohms nominal; 6 Ohms minimum
Power Handling	5 watts minimum; 135 Watts maximum
Sensitivity	90dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	±3dB tweeter level
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	10 lbs. (4.5 KG) Pair

S622TR

Tweeter	1" (25mm) Silk dome, Ferrofluid-cooled, pivoting
Woofers	6½" (165mm) Polypropylene cone, rubber surround, pivoting
Frequency Response	45Hz – 20kHz ±3dB
Impedance	8 Ohms nominal; 6 Ohms minimum
Power Handling	5 watts minimum; 125 Watts maximum
Sensitivity	89dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	None
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	10 lbs. (4.5 KG) Pair

S621TR

Tweeter	¾" (19mm) Silk dome, Ferrofluid-cooled
Woofers	6½" (165mm) Polypropylene cone, rubber surround, pivoting
Frequency Response	50Hz – 20kHz ±3dB
Impedance	8 Ohms nominal; 6 Ohms minimum
Power Handling	5 watts minimum; 100 Watts maximum
Sensitivity	88dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	None
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	9 lbs. (4.1 KG) Pair

SRS1

Tweeter	Two 1" (25mm) Silk domes, Ferrofluid-cooled
Woofers	6½" (165mm) Carbon fiber cone, rubber surround, pivoting
Frequency Response	55Hz – 20kHz ±3dB
Impedance	8 Ohms nominal; 7 Ohms minimum
Power Handling	5 watts minimum; 150 Watts maximum
Sensitivity	90dB SPL (2.83V 1 meter)
Grille Material	Perforated aluminum
Adjustments	None
Dimensions (Dia. x Depth)	9¾" (248mm) x 5⅜" (132mm)
Cutout Diameter	8⅝" (207mm)
Shipping Weight	11 lbs. (5.0 KG) Pair

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