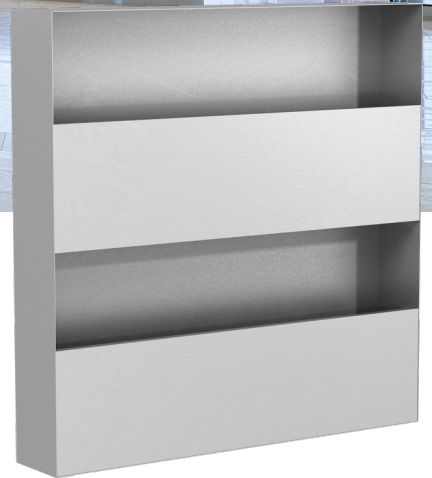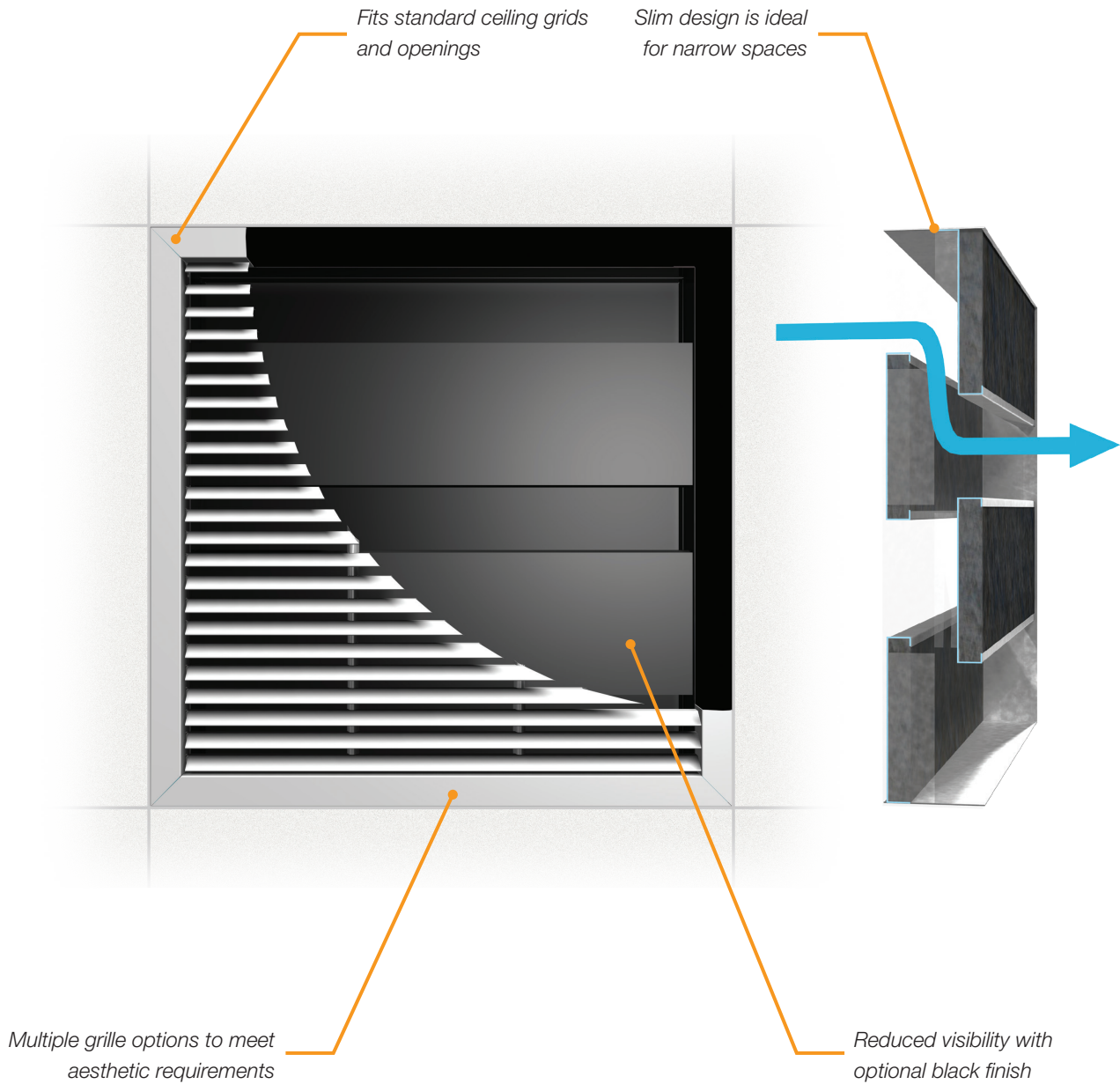# RAS

RETURN AIR SILENCER

HOLYOAKE
AIR MANAGEMENT SOLUTIONS | by price

price | NOISE CONTROL

RAS
Return Air Silencer

The compact design of the Return Air Silencer (RAS) provides an innovative solution for reducing plenum noise entering occupied spaces through return air openings and mechanical equipment noise transmission through transfer grilles.
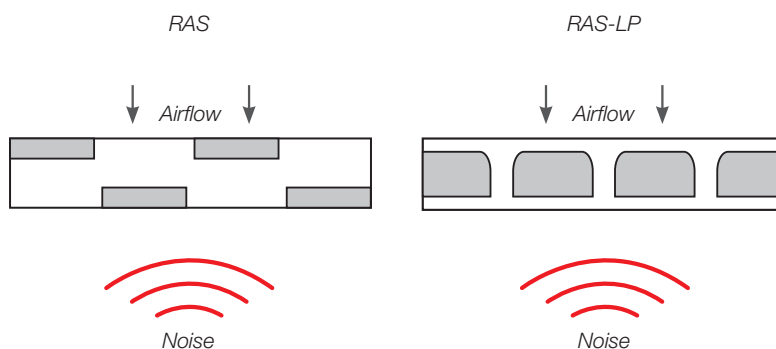
Fits standard ceiling grids and openings

Slim design is ideal for narrow spaces

Multiple grille options to meet aesthetic requirements

Reduced visibility with optional black finish

SOUND PERFORMANCE

+ Designed for return air applications, the aerodynamically designed internal geometry of RAS silencers allows return air to flow through with minimal pressure drop and maximum attenuation performance.

+ This low velocity silencer provides the highest insertion loss levels across the full range of frequencies and is best suited to applications with velocities below 3.81 m/s.

DESIGN FLEXIBILITY

+ Multiple return grille options allow the RAS to meet a variety of aesthetic requirements and minimize visibility through grilles.

+ Available in several standard sizes or custom built for each installation, the RAS integrates seamlessly with return grilles.

+ The RAS is lightweight and compact ensuring fit and ease of installation in almost any application.

+ Low pressure drop and film lined options are available for applications that require lower pressure drops or more stringent air quality requirements.

RAS — *Airflow* — *Noise*

RAS-LP — *Airflow* — *Noise*

TYPICAL APPLICATIONS

The RAS provides an effective, engineered solution to mechanical and air transfer noise. The slim design of the RAS ensures seamless integration with standard transfer grilles and is ideal for return systems that use ceiling or wall space as the return plenum, such as mechanical equipment rooms, conference rooms, and private offices.

CONSTRUCTION

+ Configuration
    - Standard (RAS)
    - Low pressure (RAS-LP)
    - Low pressure, film lined (RAS-LP-T)
+ Acoustic Media
    - Fiberglass
    - Fiber free foam
+ Material
    - Galvanized Steel
    - Galvanneal
    - Stainless Steel
    - Aluminum
+ Accessories
    - Grilles
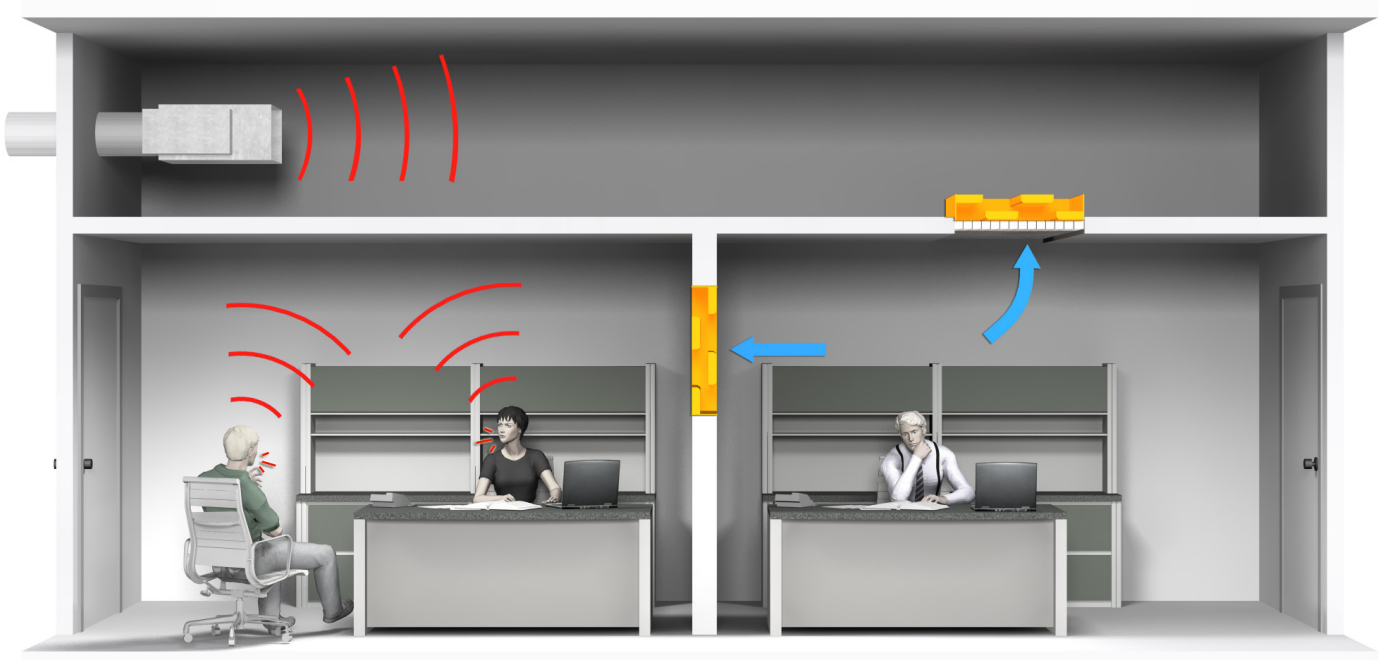   - Extended sleeve for inclusion with grilles
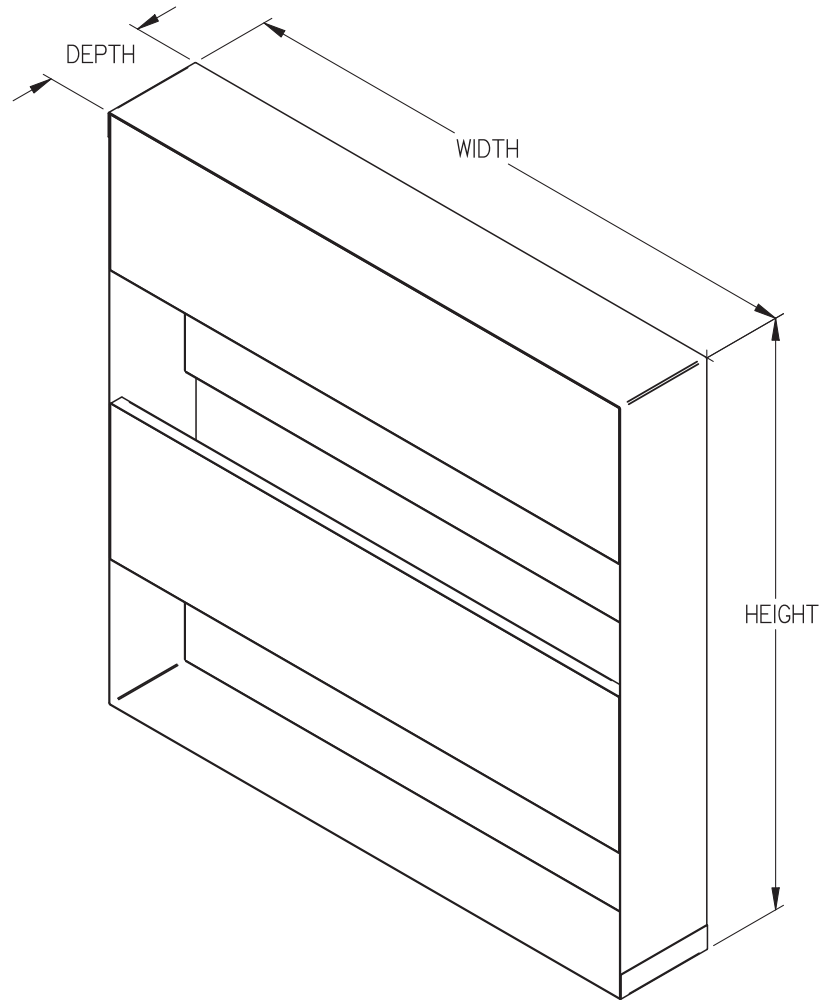
RAS
Return Air Silencer

EASY INSTALLATION

+ Designed specifically for ceiling, wall or door applications the RAS is available in standard grille sizes and fits easily onto standard ceiling grids or openings.

+ For increased convenience and single source supply, the RAS is able to be shipped with an attached return grille.

+ Silencers that exceed a width of 1200 mm are built in multiple components, then field assembled (by others).

FIRE RATED

+ Class 1 index: flame/smoke < 25/50

+ ASTM E84, UL 723, NFPA 255

DIMENSIONAL DATA

Standard Dimension Limits

Component Width		Component Height		Bank Width		Bank Height		Standard Depth
Min	Max	Min	Max	Min	Max	Min	Max	Min
150	1200	150	1200	150	12000	150	12000	100

1. All dimensions are in millimeters.
2. For sizes outside the standard range, please contact your local Holyoake office.
3. When overall width and/or height dimensions exceed the maximum component dimensions, the silencer will consist of multiple components.
4. When the overall width and/or height dimensions exceed the maximum component dimensions, the silencer will consist of multiple components.

PERFORMANCE DATA

Recommended Air Velocity Ranges

Model	Description	Air Velocity Range (m/s)
RAS	Return Air Silencer	0 - 3.8
RAS-LP	Return Air Silencer - Low Pressure Drop	0 - 3.8
RAS-LP-T	Return Air Silencer - Low Pressure Drop - Film Lined	0 - 3.8

Insertion Loss (dB)

Model	Depth mm	Measured at Octave Band Center Frequencies, Hz							STC
		63	125	250	500	1K	2K	4K	
RAS	100	2	2	3	4	9	14	10	11
RAS-LP	100	2	3	4	8	14	18	16	15
RAS-LP-T	100	2	4	5	6	9	12	11	13

Performance Notes:
1. For noise reduction +6 dB to insertion loss.

Pressure Drop (Pa)

Model	Face Velocity (m/s)	0.5	1	1.5	2
RAS	Pa	5	18	40	70
RAS - LP	Pa	3	13	30	50
RAS - LP - T	Pa	3	13	30	50

PRICE | **NOISE CONTROL**

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