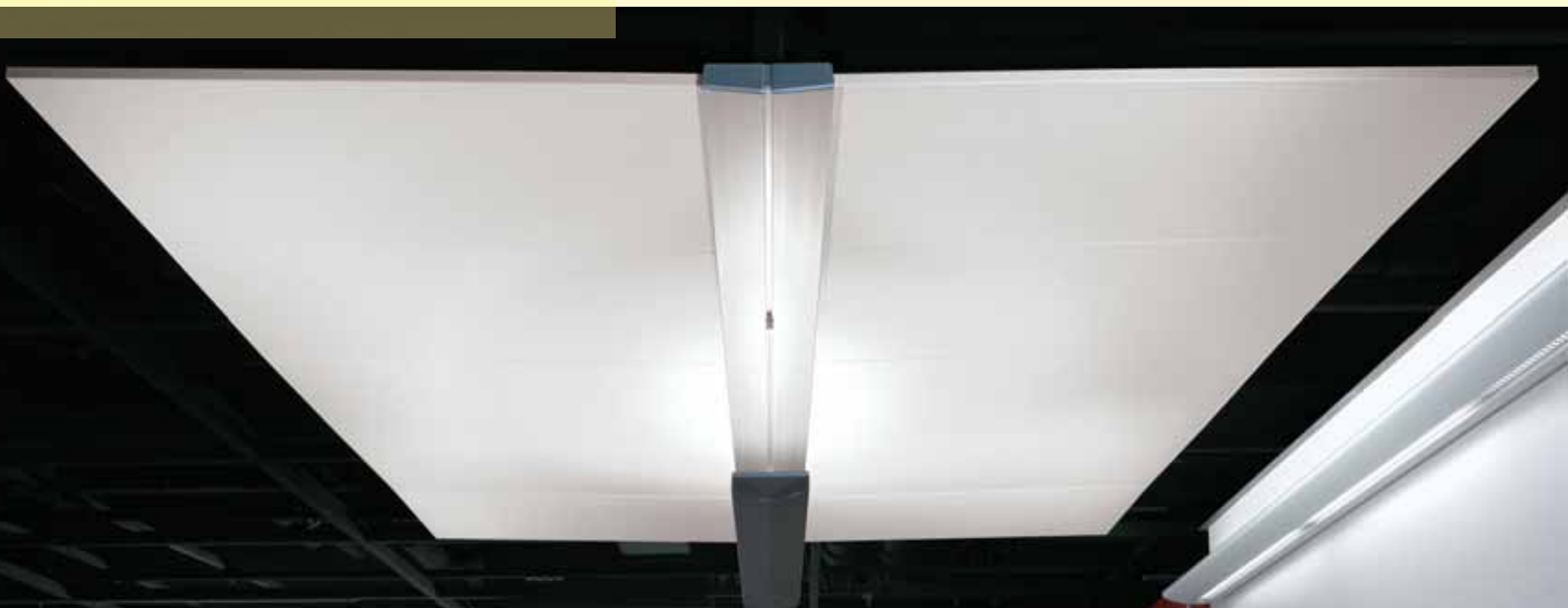


CEILING SYSTEMS

Between us, ideas become reality®

METALWORKS™ Wings
Accent & Acoustical Clouds





MetalWorks Wings in White with Silver Grey spine and indirect lighting

Key Selection Attributes

- Define and accentuate spaces with unique 3-D visual
- Easy to install
- Lightweight aluminum panels adjustable to special heights and angles off of center spine
- Perforation option available for better acoustics
- Durable – easy to clean and maintain
- Custom RAL colors available for panels and center spine

Typical Applications

- Exposed structure areas
- Lobbies and reception areas
- Office
- Corridors
- Retail and hospitality

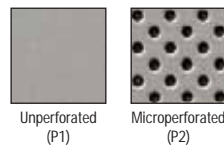
Standard Color Selection

Due to printing limitations, shade may vary from actual product.



Perforation Options

(Actual 1:1 scale shown)



Custom RAL Color Selection (partial list)

Due to printing limitations, shade may vary from actual product.



NOTE: Refer to CS-3957 for a wider sampling of Custom RAL colors. Contact Armstrong Architectural Specialties at 877 ARMSTRONG, select options 1-1-4 for custom color matching requests.

Acoustical Performance

Sound Absorption in Sabin

The Sabin is the unit of total sound absorption provided by an object. This is the preferred metric for “space absorbers” such as clouds, canopies or baffles installed within an architectural space.

Total acoustical absorption for a suspended ceiling is calculated by multiplying the exposed surface area by the material NRC while “space absorbers” are directly measured. MetalWorks Wings provide greater sound absorption than a continuous ceiling of the same surface area because the sound is absorbed from both the front and back surfaces.

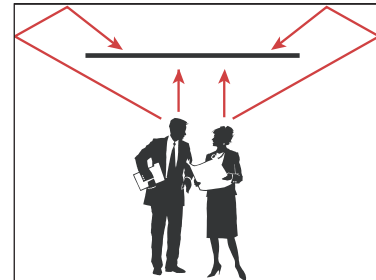
The installation of clouds and canopies in a reverberant space can significantly reduce the background noise and reverberation time, enhancing speech intelligibility.

Factors that may affect the installed acoustical performance relative to the published results are:

- Size and shape of cloud
- Number of clouds and their layout
- Suspension distance below exposed deck or finished ceiling



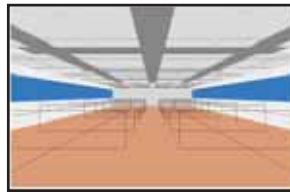
MetalWorks Wings Microperforated in Silver Grey with Silver Grey spine and FlexHead Industries Sprinkler System



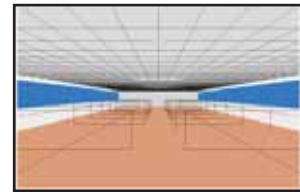
25% METALWORKS WINGS



50% METALWORKS WINGS



FULL ULTIMA® CEILING



5,000 SF Exposed Structure (50' x 100'), 15' to deck, drywall with windows two sides, commercial carpet

CEILING	None / Exposed Structure	16 MetalWorks Wings Microperforated* (25% of ceiling)	32 MetalWorks Wings Microperforated* (50% of ceiling)	Full Optima Open Plan Ceiling @ 10' H
Reverberation Time(s)	3.4s	1.5s	1.0s	0.4s
RT Reduction (%)	n/a	56%	71%	85%
SPL reduction (dB)	n/a	2.6dB	4.2dB	5.6dB
Absorption metric	n/a	81 Sabin / assembly (1.05 Sabins/ft ²)	81 Sabin / assembly (1.05 Sabins/ft ²)	NRC 0.90

* NOTE: Acoustical values above determined with use of acoustical fleece and optional fiberglass infill. Fiberglass infill (item 8200100) will need to be cut and resealed to fit panels. Fiberglass acoustical blankets by others may also be used. You can calculate the acoustical difference that MetalWorks Wings make in your space by using our online Reverb Calculator Tool at armstrong.com/reverbtool.

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views
	✓	✓	✓		

Location Dependent

Acoustics	Low Emitting or CHPS
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Colors and Perforations

White (WH)	Unperforated (P1)
Silver Grey (SG)	Microperforated (P2)
Gun Metal Grey (MY)	

Kit Components

- Panel Kit – 10 MetalWorks Wings panels
- Suspension Kit (includes spine, end caps and hardware)

Step 1: Select your panel and color

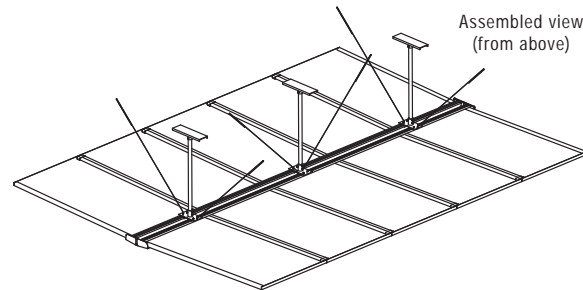
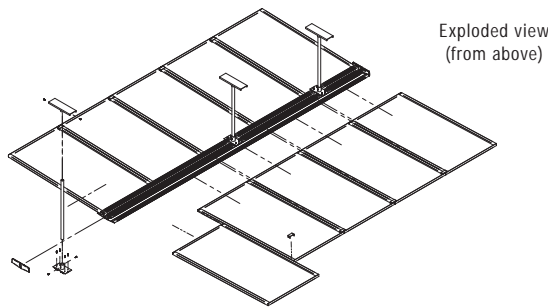
Item Number*	Description	Dimensions	Fire Rating	Light Reflect (White only)	Durable	Pcs/Ctn
5927P1__	Unperforated Panel	24" x 45"	Class A	0.77	  	10
5927P2__	Microperforated Panel with Acoustical Fleece	24" x 45"	Class A	0.61	  	10

* When specifying or ordering, include the appropriate color suffix (WH, SG, MY) with the item number.

Step 2: Select your suspension kit color (spine and end caps)

Item Number*	Description	Dimensions
5944__	Suspension Kit	8" x 10' x 2"
5945	Cradle Crate	N/A

NOTE: Suspension Kit will be shipped with the order in a cradle crate (Item 5945) for protection purposes. Each cradle crate is capable of holding 1-6 suspension kits. Be sure to specify when ordering.



Accessories

Item Number	Description	Dimensions	Pcs/Ctn
8200100	Fiberglass Infill Panel	2' x 2' x 1"	12

NOTE: Fiberglass infill will need to be cut and resealed to fit panels. Fiberglass acoustical blankets by others may also be used.

Physical Data

Panel Size

Nominal 24" x 45" for panels; Nominal 8' x 10' for total installed kit

Panel Angles

3° and 10° options included in kit

Material

Aluminum (panels and suspension spine)

Surface Finish

Factory-applied powder-coated finish (post-coated) Premium and Custom RAL colors also available. Refer to CS-3957 for a sampling of Custom RAL colors. Contact Armstrong Architectural Specialties for custom color matching requests at 1 877 ARMSTRONG; select options 1-1-4.

Suspension System

Hardware system and cables included in panel kits

Installation Consideration

MetalWorks Wings assembly requires two people to handle and install safely. See installation instructions on website for details.

Design Considerations

MetalWorks Wings, as with other architectural features located in the ceiling plane, may obstruct or skew the existing or planned fire sprinkler water distribution pattern, or possibly delay the activation of the fire sprinkler or fire detection system. Designers and installers are advised to consult a fire protection engineer, NFPA 13, and local codes for guidance on the proper installation techniques where fire detection or suppression systems are present.

For sprinkler installation through center spine, Armstrong recommends a system offered through FlexHead Industries. Please see installation instructions on website for details.

MetalWorks Wings can accommodate a variety of lighting options offered on the market today through attachment to the suspension spine.

Splay wires included with kit installed on finished product should be considered for symmetry and span dependant on Wings install height.

Acoustical Performance

81 Sabin per 8' x 10' microperforated cloud with acoustical fleece and optional fiberglass infill (item 8200100) or 1.05 Sabin/SF. See chart on page 3 for more information.

Light Reflectance

0.77 unperforated; 0.61 microperforated (white only)

Fire Performance

ASTM E84 Flame Spread Index of 25 or less and Smoke Developed Index 50 or less.

ASTM E1264 Classification

Fire Class – Class A
Unperforated – Type XX, Pattern G
Perforated – Type XX, Pattern C

Seismic Restraint

Most building codes require nonstructural building components to be restrained. Armstrong also recommends restraint in accordance with local building code requirements. The restraints included with this kit and detailed in the installation instructions should be followed. Wings restraint recommendations have been evaluated using full-scale seismic testing conducted at the Structural Engineering Earthquake Simulation Lab at SUNY at Buffalo and have been found acceptable for all seismic design categories in the USA.

Warranty

One (1) year limited warranty. Details: armstrong.com/warranty.

Weight

67 lbs. for full 8' x 10' installed kit; 40 lbs per panel carton; 30 lbs per suspension kit carton