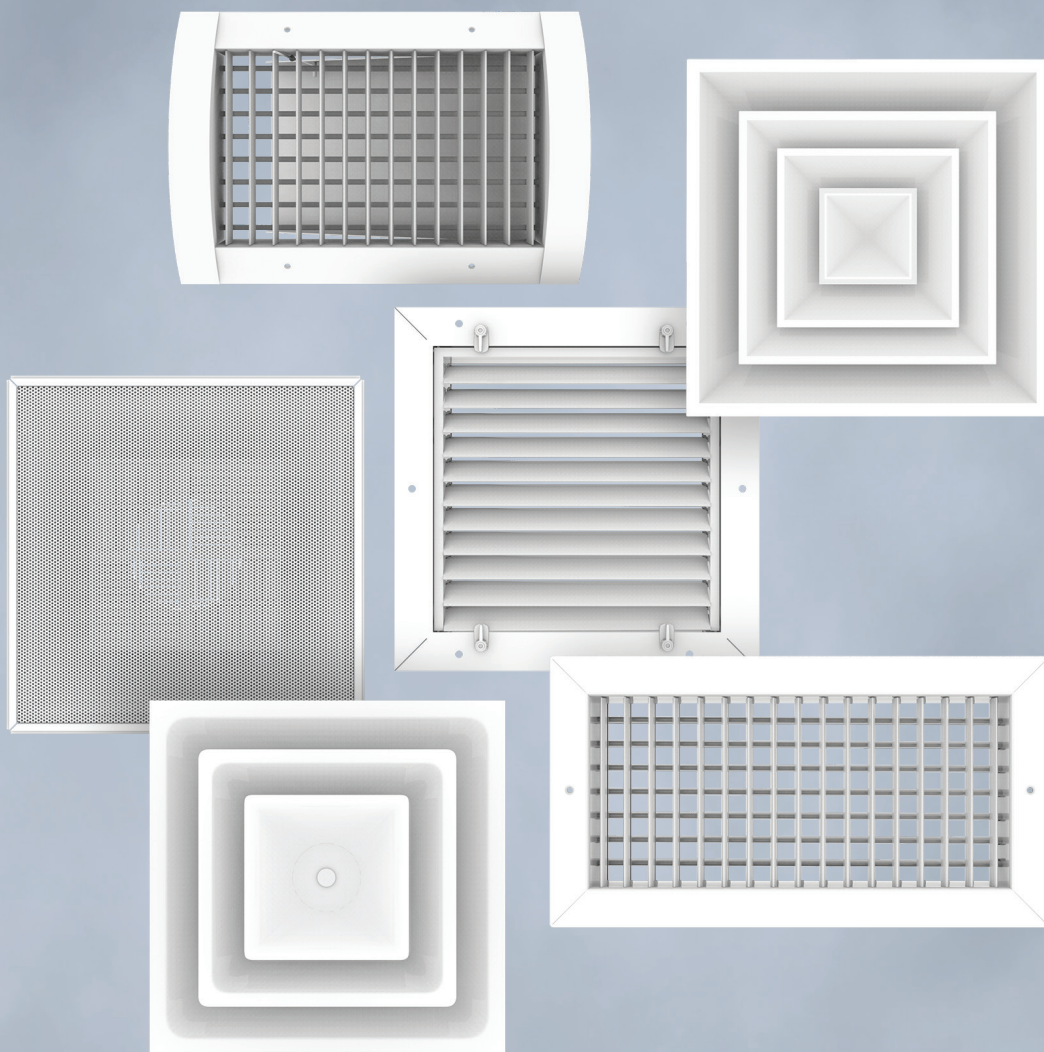


# Grilles, Registers, Diffusers, and Air Terminal Units Handbook



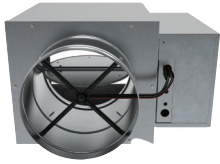
BUILDING VALUE IN AIR.



May  
2025

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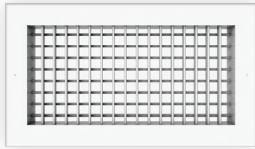
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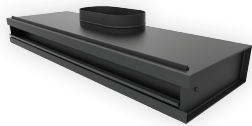
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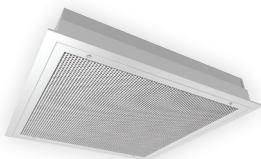
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## SINGLE DUCT

### XG-TH-510

Single Duct Air Terminal Unit



The simplest and most widely used VAV terminal unit. Capacities ranging from 80-8,000 cfm in 10 sizes.

### XG-TL-500

Low Profile Single Duct Air Terminal



This VAV terminal unit is engineered for reduced height applications. Capacities ranging from 80-4,000 cfm in eight sizes.

### XG-BP-600

Bypass Terminal Unit

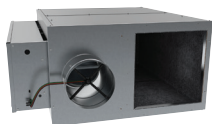


This model is used to achieve variable air volume delivery of conditioned air to a space/zone where constant volume air handlers exist.

## FAN-POWERED CONSTANT VOLUME

### XG-FCI-600

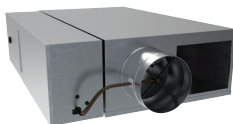
Constant Volume Fan Terminal Unit



This fan-powered terminal unit is engineered to provide a balance between quiet operation, minimal footprint, and a broad flow range.

### XG-FCL-600

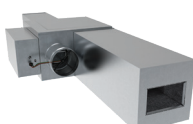
Low Profile Constant Volume Fan Terminal Unit



This low profile fan-powered terminal unit is engineered to the XG-FCI-600 specs in addition to providing reduced height for low clearance.

### XG-FCQ-700

Ultra-Quiet Fan Terminal Unit

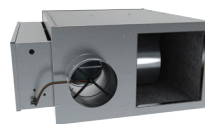


This quiet series fan-powered ATU has been engineered to provide noise levels that are the best in the business.

## FAN-POWERED VARIABLE VOLUME

### XG-FVI-500

Variable Volume Fan Terminal Unit



This parallel fan-powered terminal unit is designed to provide superior comfort to zones by intermittent parallel fan operation.

### XG-FVL-600

Low Profile Variable Volume Fan Terminal Unit

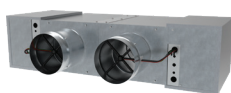


This low profile parallel fan-powered terminal unit is designed for reduced height applications.

## DUAL DUCT

### XG-DD-500

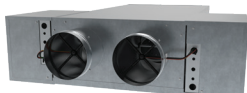
Dual Duct Air Terminal



These air terminal units regulate the flow of conditioned air in a dual duct air distribution system.

### XG-DH-500

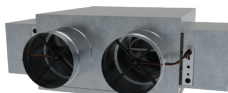
High-Performance Mixing Dual Duct Air Terminal



This model is engineered to provide an industry-leading 1:30 mixing ratio. Capacities ranging from 80-4,400 cfm in multiple unit sizes.

### XG-DS-600

Short Mixing Dual Duct Air Terminal

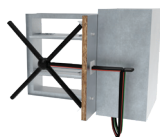


This short mixing box allows mixing of hot and cold decks in tight, limited spaces due to its small footprint.

## RETROFIT

### XG-SR-500

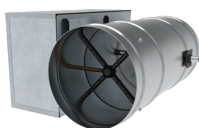
Square Retrofit Air Terminal Unit



This model is designed to fit into existing low pressure square or rectangular duct systems. Three different models to cover multiple applications.

### XG-RT-500

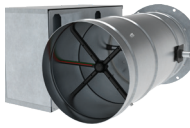
Round Retrofit Air Terminal Unit



These retrofit air terminals are designed to regulate the flow of conditioned air in single or dual duct air distribution systems.

### XG-RA-500

Customized Retrofit Air Terminal Unit



These retrofit assemblies are customized retrofit valves designed to slip into existing mechanically regulated single or dual duct terminals.

## DDC CONTROLS

### DDC Controls

Factory-Provided



A universal controller based on BACnet®. Factory-mounted, wired, and preconfigured for standard control sequences.

## SUPPLY/RETURN GRILLES & REGISTERS

**Series SGV**  
Aluminum Stamped  
Frame Supply Grilles



The series includes models SGV (Single deflection/vertical blades), SGVH (Double deflection/vertical front blades).

**Series SG41/42**  
Al./Steel, Single/Double  
Deflection Supply Grilles



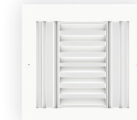
Series is offered with single deflection blades (SG41) or with double deflection blades (SG42), in Aluminum or Steel Construction.

**Series SG41/42-AF**  
Airfoil Blade Aluminum or  
Steel Supply Grilles



Series is available with single or double deflection, and with a number of options and accessories to meet a variety of applications.

**SGCB**  
Curved Blade Supply  
Grilles & Registers



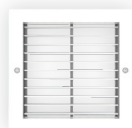
Series is available with 1-way, 2-way, 2-way opposite, 3-way, and 4-way directional air patterns.

**Series RG**  
Roll Formed Aluminum  
Return Air Grilles



Model available with several borders to integrate into a wide range of ceiling and sidewall applications. Available in Aluminum, Steel, or Extruded Aluminum.

**Series RG41**  
Return Air Grille



Series available in two frame styles (surface mount and lay-in). Available with horizontal or vertical fixed blades in aluminum or steel.

**RGCC**  
Cube Core Return  
and Exhaust Grille



Model is great for high capacity applications requiring minimum pressure drop and noise. Standard construction is aluminum.

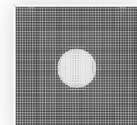
**RGCC-45**  
Sight-Proof Cube  
Core Return Grille



Model is designed for applications where it's important to limit visibility through the product.

## SPIRAL DUCT GRILLES

**RGCC-BP**  
High Capacity Cube  
Core Return Grille



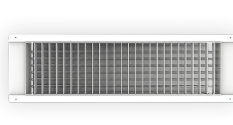
Model features an eggcrate cube core face and a hard backpan. Available in steel (S) or aluminum (AL).

**RGPF**  
Perforated Return Grille



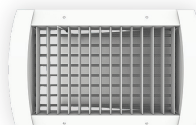
Model ideal for return/exhaust applications that require low pressure drop and low sound. Available in aluminum or steel.

**SD41/42-U**  
Single/Double Deflection  
Universal Frame Spiral Duct Grille



A universal style frame to fit a range of duct diameters. Offers superior performance in exposed duct applications offering a clean, low profile appearance. Available in steel (S) or aluminum (AL).

**SD41/42-C** Single/Double  
Deflection Aluminum Curved  
Frame Spiral Duct Grille



Spiral duct grille features a curved frame that fits flush to the contour of a round or spiral duct, offering a clean finish.

**SDPF**  
Perforated Face  
Spiral Duct Grille



Model uses a perforated face for a clean finish. Offered in a universal (U) style frame to fit a range of duct diameters or a curved (C) frame for a tight installation on a spiral duct.

## FILTER GRILLES

**SDDR**  
Universal Drum Louver  
for Spiral Duct



Model allows for delivery of a jet or diffused air pattern in spiral duct installation. Available up to 48" long.

**SDLSD**  
Supply/Return Linear Slot  
Diffuser for Spiral Duct



These linear slot diffusers integrate into exposed spiral duct systems.

**RG-FF**  
Aluminum/Steel Filter  
Return Grilles



Series available in aluminum and steel. Extruded aluminum is our premiere aluminum (AL), steel (S), extruded aluminum (E) model offering superior appearance and performance.

**RGCC-FF-05**  
Aluminum Cube Core  
Filter Return Grille



These cube core return and exhaust filter grilles provide low pressure drop and low sound levels.

**RGCC-FF-45**  
Aluminum Sightproof Cube  
Core Filter Return Grille



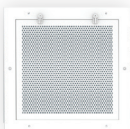
Model features a 45° core that maintains high free area. The 45° core enables a sightproof installation and prevents visibility into the ceiling or plenum.



## HEAVY-DUTY GRILLES

### RGPF-FF

Aluminum /Steel Perforated Face Filter Return Grille



Model is designed for filters (by others) and includes a hinged face with thumb latches for quick filter changes.

### HDRG

Heavy-Duty Aluminum Return Grille



An excellent choice for projects that require a grille or register to withstand moderate physical abuse.

### HDRG41

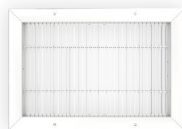
Heavy-Duty Sidewall Return Grille



These heavy-duty return grilles are designed for applications where a durable grille is needed. Available in aluminum or steel.

### HDSG41/42

Heavy-Duty Supply Grilles & Registers



These heavy-duty supply grilles are designed for applications such as gymnasiums and other public areas where a durable grille is needed. Available in aluminum and steel.

### TDG

Transfer/Door Grilles



Extruded aluminum door grilles are designed to transfer air through doors or walls. Aluminum (AL) or steel (S) transfer/door grilles are designed to transfer air through doors or walls.

## INDUSTRIAL GRILLES

### ISG11/12

Aluminum Single/Double Deflection Industrial Supply Grilles



Engineered for high capacity industrial air distribution applications where performance is a priority. Model uses 1.5" blades on 1.5" spacing.

### ISG31/32

Aluminum Single/Double Deflection Industrial Supply Grilles



Designed for ceiling and high sidewall installation. Includes 3" blades on 3" centers and a 7" deep collar.

### DRL

Industrial/High Capacity Supply-Drum Louver



This model is engineered for high capacity, long throw applications such as gymnasiums, industrial plants and other large spaces.

## SPECIALTY GRILLES

### JN

High Capacity Jet Nozzle



Jet nozzle diffusers offer an economical solution to high capacity air distribution applications requiring long throw distances.

### PKL

Aluminum Punkah Louver



Model discharges a high-velocity jet that can be directed to condition a specific space or area.

### RSGDD

Architectural Round High Capacity Grille

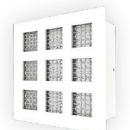


An excellent choice for applications requiring an adjustable outlet with high velocity capacities and long throw.

## SECURITY GRILLES

### SEC-LFWM

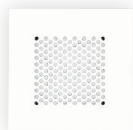
Maximum Security Grille Square Holes/Mesh Face



This steel supply grille is excellent for sidewall installation in maximum security applications such as federal correctional facilities. Uses wire mesh with lattice face.

### SEC-PF

Maximum Security Grille Perforated Face



SEC-PF uses a perforated face, while the suicide resistant (SR) option uses smaller 3/16" holes on 9/32 staggered centers.

### SEC-WM

Maximum Security Grille Wire Mesh Face



Model is a heavy-duty security grille with a wire mesh face. Used in maximum security applications.

### SEC-LF

Maximum Security Grille Steel Lattice Face



This steel security grille uses a heavy-duty steel lattice face for use in correctional facilities and other security applications.

### SEC-RG

Medium Security Grille Fixed Louver Face



This louver face steel sidewall return grille is an excellent choice for returns in medium security, supervised areas.

**SEC-LBG**

Minimum Security  
Bar Grille



Model is a return grille constructed with heavy-gauge aluminum louvers that are reinforced and attached to a steel sleeve.

**SEC-DBS**

Duct/Wall-Mounted  
Bar Grille



Duct barrier bar grille is an excellent choice for additional security in openings between secure and nonsecure areas.

## ACCESSORIES

**TBP**

T-Bar Panel for Grilles  
and Diffusers



Model is a panel for use with grilles, registers and diffusers in T-bar applications. Available in aluminum (AL) and steel (S.)

**OBD**

Opposed Blade Damper



Tapered blades set in a U-channel frame. Opposed blades on 1" centers. Screwdriver slot operator. Available in aluminum (AL), steel (S), and extruded aluminum (E).

**L9**

Equalizing Grid



Designed to provide uniform airflow in branch ducts. Pre-tensioned blades adjust individually.

**TBF**

T-Bar Frame



Permits the installation of the T-bar frame style ceiling diffuser into plaster or gypsum type ceilings. Available in aluminum (AL) and steel (S).

**TBF-TS**

Tape and Spackle  
T-Bar Frame



Used for surface mount installations that need to conceal the mounting frame.

**LIF**

Lay-In Frame for grilles



Extruded aluminum lay-in plaster frame for use in hard ceiling applications. Lay-In frame allows for hard ceiling installation of grilles. Available in aluminum (AL) or steel (S).

**TR / TR-DEEP**

Square to Round  
Transition



Square-to-round transition permits installation onto square necks to allow for round or flex duct applications.

**NDRH**

Non-Ducted Return Hood



A field-added accessory to return grilles in non-ducted plenum applications, it can be used with any Greenheck T-bar lay-in return.

## SQUARE CEILING DIFFUSERS

**CDS**

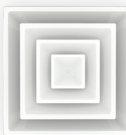
Square Cone Diffuser  
3-Cone



Three-cone square face diffuser with round neck. Available in steel and aluminum construction.

**CDS-4C**

Square Cone Diffuser  
4-Cone



Four-cone square face diffuser with round neck. Available in steel and aluminum construction.

**CDP**

Square Plaque Diffuser



Architectural plaque diffuser used for a sleek and modern look while maintaining good airflow performance. Available in steel and aluminum construction.

**CDP-RP**

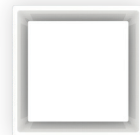
Round Face Plaque  
Diffuser



Model is the ideal diffuser for when both interior design and superior performance matter.



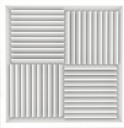

**CDP-HI**

High Induction Square  
Plaque Face Diffuser


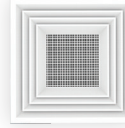

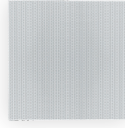
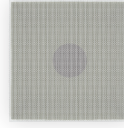




Models designed to maintain very high induction ratios even at very low airflow rates. Also available as low-flow version CDP-LF. This allows for even lower airflow rates.



## LOUVERED FACE DIFFUSERS

<b>CDD</b> Square/Rectangle Louver Face Diffuser	<b>CDD-SQA</b> Architectural Louver Face Diffuser	<b>CDMC</b> Aluminum Square Modular Core Diffuser	<b>CDDCA</b> Cold Aisle Diffuser - Louver Face/Cube Core
			
Models provide an aesthetically pleasing solution to air distribution requirements, regardless of room configurations. Available in aluminum or steel.	Model offers an architectural air diffuser designed to excel in both performance and aesthetic appeal. Can be used with center ceiling tile for increased aesthetics.	Model uses removable modular cores which allow for a wide range of airflow configurations with multiple optional border types available in aluminum or steel.	Model is a hybrid unit that combines the features of a CDD louver face diffuser with a cube core dampered center.

## PERFORATED CEILING DIFFUSERS

<b>LLF</b> Linear Louver Face Diffuser	<b>CDCSR</b> Concentric Supply/Return Ceiling Diffuser	<b>CDPF-NCB-E</b> Extruded Aluminum Perforated Diffuser	<b>CDPP</b> Perforated Panel for Non-Ducted Returns	<b>CDPF-DD</b> Perf. Supply Diffuser with Fiberglass Backpan
				
Model designed for continuous length applications where the clean lines of a louver face diffuser are desirable.	Concentric supply/return diffusers provide a functional solution to rooftop package single outlet air distribution requirement.	Model is an aluminum, perforated supply diffuser with curved blade pattern controllers mounted in the neck of the diffuser.	Models are an economical choice for non-ducted plenum return applications and are shipped without pattern controllers. Available in aluminum (AL) and steel (S).	Model is an economical diffuser with a fiberglass plenum, designed to allow field installation of the inlet collar (by others).

<b>CDPF-FMD</b> Perforated Diffuser Face-Mounted Pattern Cont.	<b>CDPF-NCB</b> Perforated Diffuser Curved Blade Pattern Cont.
	
Models have face-mounted adjustable pattern controllers, available with round or square necks and are an excellent choice for VAV applications.	A great choice for VAV applications. The hinged removable face allows for access to the pattern controllers, available with round or square neck.

<b>CDPF-RF</b> Perforated Filter Back Ceiling Diffuser	<b>CDPF-MC</b> Perforated Face Diffuser with Modular Core
	
Model incorporates a basic perforated diffuser with a filter rack to allow for filtered air applications.	Model uses a perforated face with adjustable modular cores, available in aluminum (AL) or steel (S) and an excellent choice for VAV applications.



## ROUND CEILING DIFFUSERS

**CDR**

Fixed/Adjustable  
3-Cone Round Diffuser



Excellent choice for high capacity applications. Discharge pattern is easily adjusted from vertical to horizontal. Available in aluminum (AL) or steel (S) with optional fourth cone (4C).

**CDIR**

Heavy-Duty Steel  
Adjustable Round Diffuser



Models incorporate a high induction design to efficiently handle large volumes of air at high cooling temperature differentials.

**CDRP**

Round Panel  
Architectural Diffuser



Model blends well into the ceiling surface. Available in aluminum, aluminum face with steel backpan and steel construction.

## VAV DIFFUSERS

**CDP-TCH**

VAV Diffuser



Models are thermally powered variable volume air diffusers which are completely non-electronic and self-contained.

**CDP-ECH**

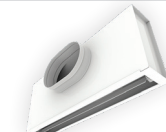
Electronic VAV Diffuser for  
Heating/Cooling Control



Model regulates the amount of supply air into the space, uses a wall-mounted thermostat to achieve true VAV control in heating/cooling mode.

**LD-AS**

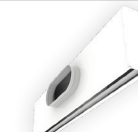
Linear "Anti-Strat" Heat/  
Cool Changeover Diffuser



Change in air pattern prevents stratification issues with heated air diffusion. Thermally powered by the supply air.

**LD-TCH**

VAV Linear Diffusers



Induction slot samples room air to assure precise control. Available in cooling only and heat/cool.

## FIRE-RATED PACKAGES

**CDD-FRS**

Louver Face Ceiling Diffuser  
with Radiation Damper



Model is a steel louvered face diffuser with a square neck, a UL-Listed ceiling radiation damper and thermal blanket.

**CDS-FRS**

Square Face Diffuser  
with Radiation Damper



Model is a steel 3-cone diffuser with a round neck, a UL-Listed ceiling radiation damper and thermal blanket. Model is a steel square cone diffuser.

**CDPF-FRS-FMD**

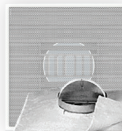
Perforated Ceiling Diffuser  
with Radiation Damper



Model is a perforated ceiling diffuser with face-mounted pattern deflectors, a UL-Listed ceiling radiation damper and thermal blanket.

**CDPF-FRS-NCB**

Perforated Ceiling Diffuser  
with Radiation Damper



Model is a perforated ceiling diffuser with neck-mounted pattern deflectors, a UL-Listed ceiling radiation damper and thermal blanket.

**RGCC-FRS**

Sidewall/Ceiling Return  
Grille w/Radiation Damper



Model is a steel eggcrate grille with a UL-Listed ceiling radiation damper and thermal blanket.

**CDPP-FRS**

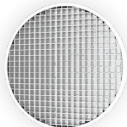
Perf. Non-Duct Screen with  
Radiation Damper



Model is a perforated non-ducted screen with a UL-Listed ceiling radiation damper and thermal blanket.

## ACCESSORIES

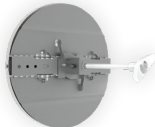
<b>G3</b> Aluminum Round Equalizing Grid	<b>BDS</b> Steel Butterfly Damper	<b>G3-BDS</b> Round Equalizing Grid w/ Steel Butterfly Damper	<b>RSD</b> Galvanized Steel Radial Shutter Damper	<b>G3-RSD</b> Round Equalizing Grid w/ Radial Shutter Damper
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Model is for use with round duct to create a uniform airflow distribution as the air enters the diffusers. Equalizing grids are helpful when diffusers are in close proximity to elbows.



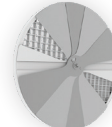
Model is a steel butterfly damper with adjustable blades.



Model allows for system balancing at the diffuser while the equalizing grid ensures even air distribution.

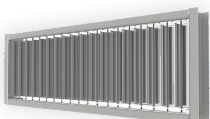


Model is a galvanized steel radial shutter damper for use with round neck diffusers.



Model allows for system balancing at the damper while equalizing grid ensures even air distribution.

<b>D5/D7</b> Damper for Series CDD/CDPF	<b>OBD</b> Opposed Blade Damper	<b>L9</b> Equalizing Grid	<b>TBF</b> T-Bar Frame	<b>TBF-TS</b> Tape and Spackle
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Model is a steel opposed blade damper for Series CDD/CDPF diffusers, available in aluminum (AL) or steel (S).



Model has tapered blades in a U-channel frame. Opposed blades on 1" center, with screwdriver slot operator. Available in aluminum (AL), steel (S), and extruded aluminum (E).



Model is designed to provide uniform airflow in branch ducts. Pre-tensioned blades adjust individually.



Model permits the installation of the T-bar frame style ceiling diffuser into plaster or gypsum type ceilings. Optional hardware kits available.



Model allows a T-bar mounted product to be installed into a hard ceiling. Model is unique with a ridged frame which is intended to be used in a tape-and-spackle application.

## ENGINEERED POLYMER PRODUCTS

<b>TR/TR DEEP</b> Square to Round Transition	<b>EP-RGCC-FF</b> Engineered Polymer Cube Core Filter Grille	<b>EP-CDD</b> Engineered Polymer Louvered Face Diffuser	<b>EP-RG-FF</b> Eng. Polymer Louvered Face Return Filter Grille	<b>EP-CDS</b> Engineered Polymer Square Cone Diffuser
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Model permits installation onto square necks to allow for round or flex duct applications. Available as an accessory to most products with square necks.



Model uses a 1/2" x 1/2" x 1/2" cube core design and is used with a disposable filter. Includes a hinged face for easy filter removal/replacement.



Model uses an engineered polymer louvered face design for optimal performance. The polymer material resists corrosion and is nonmagnetic.



Model can be used with a filter in applications which call for a clean appearance, lightweight, corrosion resistance, and easy installation.



Model provides a tight 360° discharge pattern for superior induction/occupant comfort. Design maximizes airflow performance while keeping pressure drop to a minimum.

<b>EP-CDP</b> Engineered Polymer Square Plaque Diffuser
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Model uses an attractive single panel design which blends well into the ceiling and maintains architectural aesthetics as well as engineering performance.

## LINEAR ARCHITECTURAL DIFFUSERS

### LAD

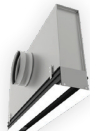
Linear Architectural Diffuser



Models satisfy the most demanding engineering and architectural criteria. Available in several border styles.

### LADTS

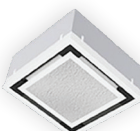
Linear Architectural Diffuser Tee System



System LADTS includes Model LAD and a plenum assembled. The LADTS is a perfect choice for acoustical ceiling applications, available with uninsulated or insulated plenum.

### LADSQ

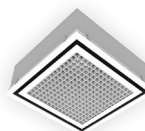
Linear Architectural Square Diffuser



Allows for a center panel comprised of a ceiling tile or metal panel to blend the unit into the ceiling. This provides a beautiful architectural consistency.

### LADSQH

Linear Architectural High-Capacity Square Diffuser



Model is a high-capacity return that features the integrated look of the LADSQ return, but adds a cube core center to dramatically increase return capacity.

## LINEAR ARCHITECTURAL DIFFUSERS ACCESSORIES

### LADMC

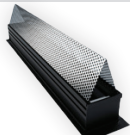
Linear Architectural Diffuser Mitered Corner



Model is for architectural linear slot diffuser Model LAD. Mitered corner can come with a 90°, 45° or 135° miter.

### LAD-LS

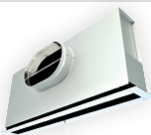
Linear Architectural Diffuser Light Shield



Model is a triangular light shield hood for the LAD series architectural linear diffusers, designed to block light that can be seen from the diffuser opening.

### FODR

Face-Operated Damper



Model is a face-operated damper rod used to control the airflow through a UP universal plenum. Damper is connected to a metal rod which is pushed or pulled from damper face.

## LINEAR SLOT DIFFUSERS

### LSD

Supply/Return Linear Slot Diffuser



Models offer supply/return linear slot diffusers with integral pattern controllers and a variety of border styles for every application.

### SDLS

Supply/Return Linear Slot Diffuser for Spiral Pipe



Series aluminum supply/return linear slot diffusers are designed to integrate into exposed spiral duct systems.

### LSDSQ

Square Linear Slot Diffuser



This model uses a linear diffuser in a square layout for lay-in ceilings. This provides an architecturally pleasing design with many variations available.

### LSDTZ

Linear Slot Diffusers for Architectural Ceilings

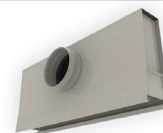


Model is compatible for use with Armstrong® TechZone™ and USG Logix™ Architectural Ceiling Systems.

## UNIVERSAL PLENUMS

### UP

Universal Plenum



Universal plenum is used with any linear diffuser model, available in uninsulated or insulated.

## LINEAR BAR GRILLES

### LBG-1-12A

Extruded Aluminum Linear Bar Grille



Model has a 1" flange, 7/32" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15, and 30 degrees are available.

### LBG-2-12A

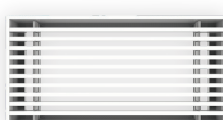
Extruded Aluminum Linear Bar Grille



Model has a 1/2" flange, 7/32" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees are available.

### LBG-3-12A

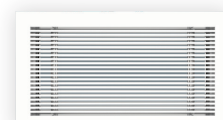
Extruded Aluminum Linear Bar Grille



Model has a 3/16" flange, 7/32" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15, and 30 degrees are available.

### LBG-1-14B

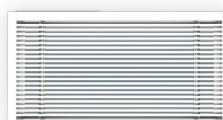
Extruded Aluminum Linear Bar Grille



Model has a 1" flange, 1/8" bar thickness and 1/4" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees are available.

### LBG-2-14B

Extruded Aluminum Linear Bar Grille



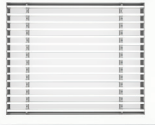
Model has a 1/2" flange, 1/8" bar thickness and 1/4" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees are available.



## LINEAR BAR GRILLES (CONTINUED)

### LBG-1-12B

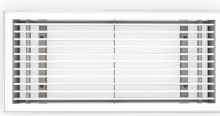
Extruded Aluminum  
Linear Bar Grille



A 1" flange, 1/8" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees.

### LBG-2-12B

Extruded Aluminum  
Linear Bar Grille



A 1/2" flange, 1/8" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees.

### LBG-3-12B

Extruded Aluminum  
Linear Bar Grille



A 3/16" flange, 1/8" bar thickness and 1/2" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees.

### LBG-2-14B

Extruded Aluminum  
Linear Bar Grille



A 1/2" flange, 1/8" bar thickness and 1/4" bar spacing. Multiple frame styles are available. Deflection angles of 0, 15 and 30 degrees.

## PLENUM SLOT DIFFUSERS WITH ADJUSTABLE PATTERN CONTROLS

### PSD

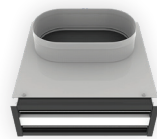
High-Performance  
Plenum Slot Diffuser



Made with heavy-duty extruded aluminum pattern controllers and gasket for horizontal discharge pattern.

### PSDIT

Plenum Slot Diffuser with  
"Ice Tong" Blades



Designed with "ice tong" blades for 180° pattern control. Curved pattern controllers produce a horizontal air pattern.

### PSDJ

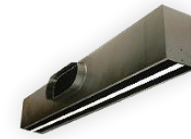
High Capacity Diffuser Lay-In  
with Fixed Control Vanes



Model uses unique pattern controllers for different applications. Each has fixed vanes for air control.

### PSDE

Plenum Slot Diffuser Lay-In  
with Fixed Control Vanes



Maintains an air pattern tight against the ceiling in constant or variable control systems.

### PSDHC

Plenum Slot Diffuser w/ Fixed  
Curved Blade Pattern Controller

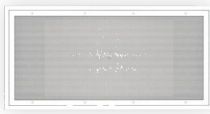


Model features unique fixed curved blade for optimal performance and an optional downblow section to allow for carefully controlled airflows.

## LAMINAR FLOW DIFFUSERS

### HLC-CLF

Multichamber  
Laminar Flow Diffuser



Model is engineered for supply air distribution in cleanrooms and operating rooms. The multichamber design ensures low velocity laminar flow.

### HLC-LFD

Laminar Flow  
Supply Diffuser



Models are engineered for clean supply air distribution in operating and cleanrooms to supply a low velocity vertical "piston" of conditioned air.

### HLC-GSL

Laminar Flow Diffuser  
with Gel Seal Filter

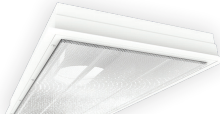


Model is engineered to help control particle contamination; applications include cleanroom, laboratories and hospital operating rooms.

## RADIAL FLOW DIFFUSERS

### HLC-FFR

Radial Flow  
Supply Diffuser



Models are engineered for supply air distribution in critical environments such as chem. labs and cleanrooms. Radial diffusers supply large volumes of air with very short throw patterns.

### HLC-GFR

Radial Flow Diffuser  
with Gel Seal Filter

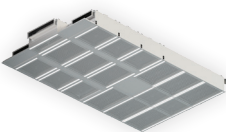


Model includes a gel seal filter and is engineered for supply air distribution in critical environments such as chem. labs and cleanrooms.

## OPERATING AND IMAGING ROOM SYSTEMS

### HLC-MPA

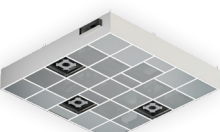
Laminar Flow  
Diffuser Array



Modular, customizable laminar flow diffuser array design for operating and imaging rooms.

### HLC-SPA

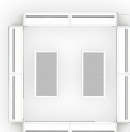
Pre-engineered  
Laminar Diffuser System



A complete, pre-engineered, fully customizable laminar diffuser system with integrated structural support of surgical booms and imaging devices.

### HLC-SAC

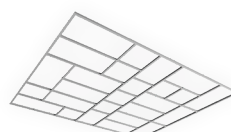
Operating Room Surgical  
Air Curtain System



Model provides control over particulate matter in the operating room environment. It provides the highest standard of air cleanliness.

### HLC-HCG

Customizable Ceiling  
Grid System



Customizable heavy-duty ceiling grid system specifically designed for hospital, laboratory, and cleanroom applications.

**RECTANGULAR DISPLACEMENT  
DIFFUSERS**

**DDREC**

Rectangular Wall-Mounted  
Displacement Diffuser



Model is designed for wall mounting around the periphery of a room. Our uniquely designed mounting system allows for quick and easy installation.

**DDCU**

Triangular Corner Unit  
Displacement Diffuser



Model is designed for mounting in corners of rooms. Our uniquely designed mounting system allows for quick and easy installation.

**ROUND DISPLACEMENT  
DIFFUSERS**

**DDRD**

Round, Free Standing  
Displacement Diffuser

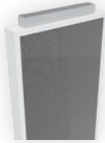


Model DDRD is available in full round 360° airflow, half round 180° airflow, or quarter round 90° airflow. Units allow for easy to install low velocity displacement diffusion.

**IN-WALL MOUNT  
DISPLACEMENT DIFFUSERS**

**DDW**

Wall Displacement Diffuser



Model DDW is available in an “In-wall” style or “flush mount” style with spring clip mounting. Model DDW provides a one way displacement diffuser.