DYNAMAX® Plus

Structural Aluminum Suspension System

SUSTAIN™
High Performance
Sustainable
Ceiling Systems

DynaMax Plus Structural Aluminum Suspension System

This system provides the accessibility and flexibility of DynaMax® grid but with enhanced load-carrying capacity for 6' and 8' rod drops.

KEY SELECTION ATTRIBUTES

- Allows for longer spans (6' and 8') while also providing greater load-carrying capacity
- 6' spacing allows for direct attachment to steel joists or pre-cast concrete tees
- Spanning 6' or more eliminates the need for slotted strut channel at deck/roof level and creates more space for critical MEP components
- Eliminates up to 1/2 of threaded rods/accessories utilized today for typical 48" hanging spans
- Ideal combination of a finished ceiling system with a structural solution
- Easy integration into a conventional grid system using AXTBC clip and DynaMax® Plus boss channels
- Can integrate seamlessly with select Armstrong® ceiling panels for a complete ceiling system solution
- Suspension system has continuous threaded boss channel, allowing 3/8"–16 threaded rod to be installed to the suspension system at any location
- Available in 24" × 24", 24" × 48", and 48" × 48" suspension system layouts
- Allows for 96" × 96" (or similar) structural pods/bays with acoustical grid infill using AXTBC clips
- Fully accessible system allows for future expansion and upgrades
- Non-progressive installation allows you to remove or replace a section of the system without the need to dismantle those components around it
- Cross tees not bearing any load are removable for plenum access without compromising the structural integrity of the system
- 10-Year Limited Suspension System Warranty; 30-Year Limited Ceiling System Warranty
- For custom layout information and technical guidelines, contact TechLine customer support at 877 276-7876

For Data Center Applications

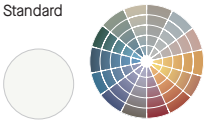
- Provides a suspension platform or attachment for data center cable trays, equipment, partitions, and hot and cold aisle containment barriers from building structure to below the ceiling plane
- Finished ceiling system offers a containment barrier to protect servers from debris
- Controls airflow by eliminating penetrations
- Grid provides increased temperature and pressure management, reduced leakage, and enables the best hot and cold air containment at the ceiling plane when compared to other ceiling types
- Available with Ultima® AirAssure® panels with factory-gasketed edges to provide even greater temperature and pressure management
- Lighting, diffuser, and containment options are available from our Data Center lighting and MEP partners

TYPICAL APPLICATIONS

- Data Centers
- Laboratories
- Hospitals
- Industrial Warehouses/ Distribution Centers
- Retail/Convenience Store

COLORS

Standard



White (WH) | Available in any color!

White is standard color for main beams and cross tees.
All brackets and hardware are unfinished.
Custom colors and finishes are available for main beams, cross tees, perimeter molding, and ceiling panels.
Contact Armstrong Customer Service 877 276-7876

TechLine 877 276-7876
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SUSPENSION SYTEMS – DATA CENTERS

DYNAMAX® Plus

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50% ALUMINUM RECYCLED CONTENT

Calculate sustainability with Ecomedes armstrongceilings.com/ecomedes

energy management | construction waste mgmt | regional materials | design for flexibility | EPD | recyclable/ extended producer resp. | biobased materials | recycled content | sourcing of raw materials | material ingredient reporting | low emitting/ materials | lighting quality | acoustics

▲ LOCATION DEPENDENT

Well Building Standard™ (WELL) Living Building Challenge® (LBC)

SUSPENSION SYTEMS – DATA CENTERS

VISUAL SELECTION

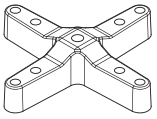
PACKAGING

	Item No.	Description	Dimensions (Inches) L × W × H	PCS/ CTN	LF/ CTN
DynaMax® Plus Structural Aluminum Suspension System	**DM9301**	Main Beam	144 x 2 x 3-5/8"	2	24
	DM9320	2' Cross Tee	24 x 2 x 3-5/8"	6	12
	DM9340	4' Cross Tee	48 x 2 x 3-5/8"	6	24
	DM9360	6' Cross Tee	72 x 2 x 3-5/8"	2	12
	DM9380	8' Cross Tee	96 x 2 x 3-5/8"	2	16
	DM9800	Perimeter Molding	144 × 2-1/8 × 3-3/4"	2	24

NOTE: Contact local engineer for job-specific load and/or seismic requirements.
*Factory gasketing available upon request.

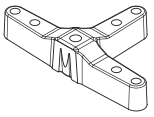
ACCESSORIES

DMXB – X-Bracket
Used to connect all cross tees together for rigid connection



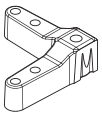
DMXB – 24 PCS

DMTB – T-Bracket –
Used to connect main beams and cross tees to the perimeter extrusion



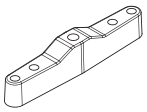
DMTB – 36 PCS

DMLB – L-Bracket –
Used to connect perimeter extrusion corners together



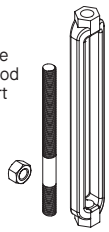
DMLB – 12 PCS

DMIB – I-Bracket –
Used to splice together main beam ends



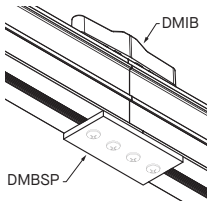
DMIB – 24 PCS

DMHWK – Hardware Kit –
Turnbuckles and threaded rods are used to connect the X-brackets to the threaded rod to create a structural support for the grid.**



DMHWK – 12 PCS
** 1/2" hardware kit available upon request.

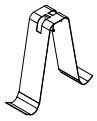
DMBSP – DynaMax Main Beam Splice Plate – Used with DMIB I-Bracket to splice together main beams that butt up against one another



DMBSP – 24 PCS

OPTIONAL ACCESSORIES

DMPHDC – Hold-down Clip for DynaMax Plus – Attaches to the suspension system to hold Lay-in panels in place



DMPHDC – 100 PCS

DM3FGSKT – Main Beam and Cross Tee Field Gasket for DynaMax Plus – Field Gasket option for DynaMax Plus Main Beams and Cross Tees

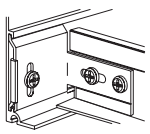
DM3FGSKT – 108 LF/roll

DM8FGSKT – Perimeter Molding Field Gasket for DynaMax Plus – Field Gasket option for DynaMax Plus Perimeter Molding

DM8FGSKT – 10LF/roll

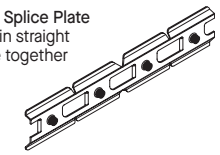
NON-STRUCTURAL CEILING ADAPTER ACCESSORIES

AXTBC – Axiom® T-Bar Connector Clip – Provides positive mechanical lock with factory-installed screw. Screw-fastened connection to suspension members that intersect the trim channel.



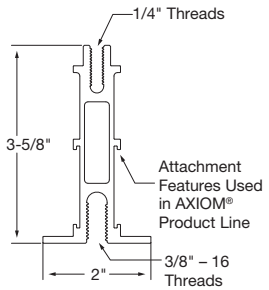
AXTBC – 1 PC

AX4SPLICEB – Axiom Splice Plate with Set Screws – Join straight sections of light cove together

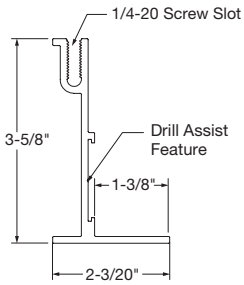


AX4SPLICEB – 1 PC

DETAILS



DynaMax Plus Main Beam



DM9800 Perimeter Molding

LOAD DATA FOR DYNAMAX PLUS SUSPENSION SYSTEMS

Member Span and Spacing (IN.)	48"	60"	72"	96"
Maximum Allowable Uniform Area Load (LBS/SF)	113	72	50	28
Mid-Span Point Load @ L/360 Deflection (LBS)	1090	690	480	270
Maximum Static Point Load (LBS)	1800	1800	1800	1800
3/8" Turnbuckle Maximum Load to Structure (LBS)	1,200	1,200	1,200	1,200
1/2" Turnbuckle Maximum Load to Structure (LBS)	2,200	2,200	2,200	2,200

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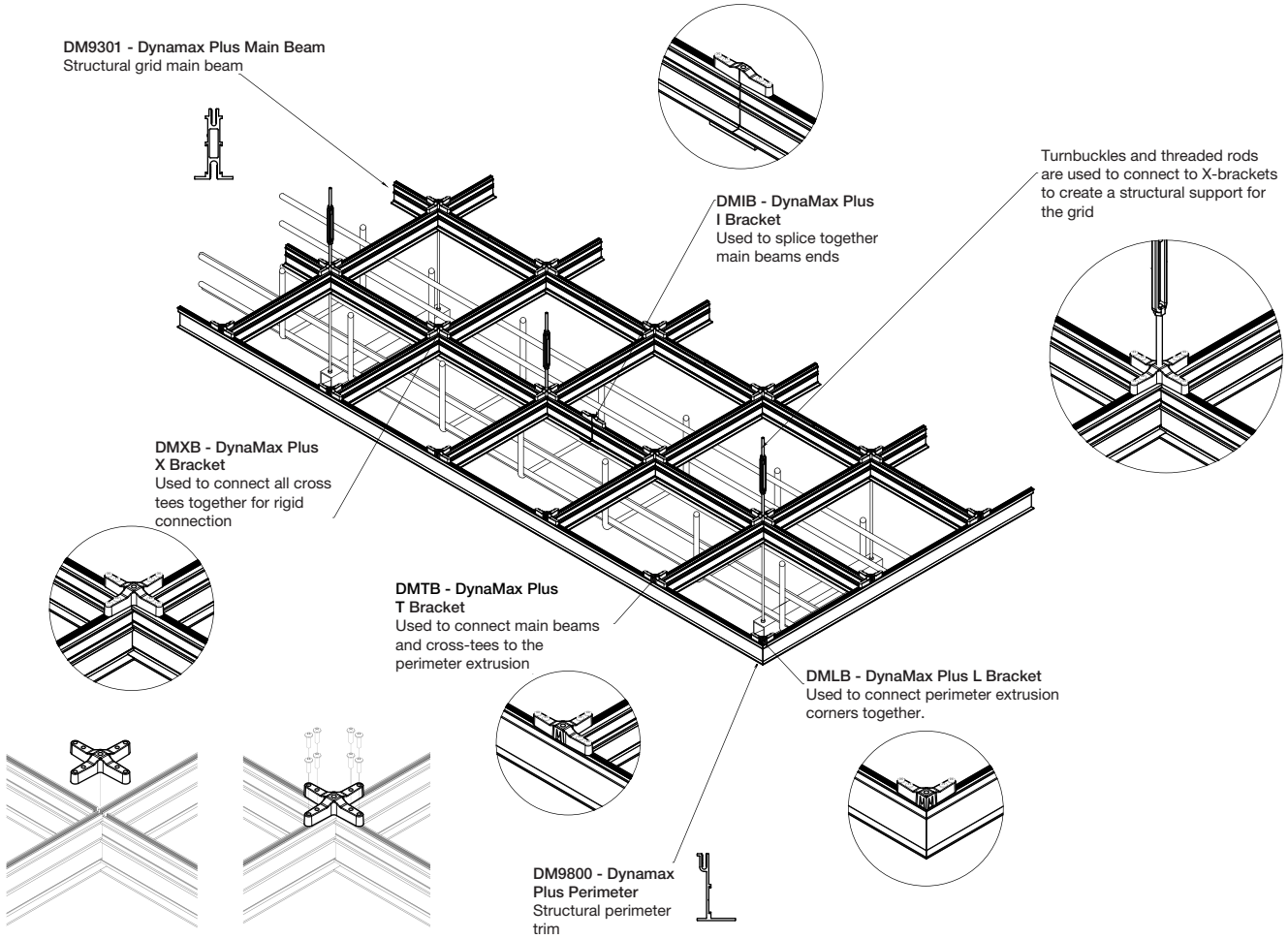
energy management	construction waste mgmt	regional materials	design for flexibility	EPD	recyclable/ extended producer resp.	biobased materials	recycled content	sourcing of raw materials	material ingredient reporting	low emitting/ materials	lighting quality	acoustics
	✓	✓	✓	✓			✓	✓		✓		

▲ LOCATION DEPENDENT

Well Building Standard™ (WELL) Living Building Challenge® (LBC)

DYNAMAX® PLUS SUSPENSION SYSTEM INSTALLATION OVERVIEW



SUSPENSION SYTEMS – DATA CENTERS

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LOCATION DEPENDENT

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SUSPENSION SYTEMS – DATA CENTERS

CEILING PANELS

Ceiling panels are specially sized and engineered for DynaMax® Plus suspension system and must be used with the system. These panels do not fit in other suspension systems. Dots represent high level of performance.

Edge Profile	Item No.	Dimensions (Inches)	Sound Absorption (NRC)	+	Sound Blocking (CAC)	=	Total Acoustics[1] (NRC + CAC)	Articulation Class (AC)	Fire Performance	Light Reflect	Bio-Block Mold & Mildew Protection	Humi-Guard+ Sag Resistant	Certified Low VOC Emissions	Durability	Recycled Content	Recycle Program	30-Yr Warranty
FINE FISSURED™ for DYNAMAX Plus Square Lay-in	**4126**	23-1/4 × 23-1/4 × 5/8"	0.55	+	35	=	N/A	N/A	Class A	0.82	•	•	•	Std	Std	•	•
	4126BL (Black)	23-1/4 × 23-1/4 × 5/8"	0.55	+	35	=	N/A	N/A	Class A	N/A	•	•	•	Std	Std	•	•
	4127	23-1/4 × 47-1/4 × 5/8"	0.55	+	35	=	N/A	N/A	Class A	0.82	•	•	•	Std	Std	•	•
	4127BL (Black)	23-1/4 × 47-1/4 × 5/8"	0.55	+	35	=	N/A	N/A	Class A	N/A	•	•	•	Std	•	•	•
CALLA® for DYNAMAX Plus Square Lay-in	**2896**	23-1/4 × 23-1/4 × 1"	0.85	+	35	=	**BEST**	170 •	Class A	0.85 •	•	•	•	•	•	•	•
	2896BK (Black)	23-1/4 × 23-1/4 × 1"	0.85	+	35	=	**BEST**	170 •	Class A	N/A	•	•	•	•	•	•	•
	2897	23-1/4 × 47-1/4 × 1"	0.85	+	35	=	**BEST**	170 •	Class A	0.85 •	•	•	•	•	•	•	•
	2897BK (Black)	23-1/4 × 47-1/4 × 1"	0.85	+	35	=	**BEST**	170 •	Class A	N/A	•	•	•	•	•	•	•
DUNE™ for DYNAMAX Plus Square Lay-in	**4270**	23-1/4 × 23-1/4 × 5/8"	0.50	+	35	=	N/A	N/A	Class A	0.81	•	•	•	•	•	•	•
	4271	23-1/4 × 47-1/4 × 5/8"	0.50	+	35	=	N/A	N/A	Class A	0.81	•	•	•	•	•	•	•
ULTIMA® for DYNAMAX Plus Square Lay-in	**1807**	23-1/4 × 23-1/4 × 3/4"	0.75	+	35	=	**BETTER**	170 •	Class A	0.88 •	•	•	•	•	•	•	•
	1808	23-1/4 × 47-1/4 × 3/4"	0.75	+	35	=	**BETTER**	170 •	Class A	0.88 •	•	•	•	•	•	•	•
ULTIMA® AirAssure® for DYNAMAX Plus Square Lay-in	**1599**	23-1/4 × 23-1/4 × 3/4"	0.75	+	35	=	**BETTER**	N/A	Class A	0.88 •	•	•	•	•	•	•	•
	1638	23-1/4 × 47-1/4 × 3/4"	0.75	+	35	=	**BETTER**	N/A	Class A	0.88 •	•	•	•	•	•	•	•
OPTIMA® PB for DYNAMAX Plus Square Lay-in	**3210PB**	47-5/16 × 47-5/16 × 1"	0.95	+	N/A	=	N/A	190 •	Class A	0.88 •	•	•	•	•	•	•	•

[1] Total Acoustics® ceiling panels have an ideal combination of sound absorption and sound blocking in one product.
GOOD (NRC 0.60-0.65; CAC 35+) **BETTER** (NRC 0.70-0.75; CAC 35+) **BEST** (NRC 0.80+; CAC 35+)

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50% ALUMINUM RECYCLED CONTENT

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energy management	construction waste mgmt	regional materials	design for flexibility	EPD	recyclable/ extended producer resp.	biobased materials	recycled content	sourcing of raw materials	material ingredient reporting	low emitting/ materials	lighting quality	acoustics
	✓	✓	✓	✓			✓	✓		✓		

▲ LOCATION DEPENDENT

Well Building Standard™ (WELL)
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VISUAL SELECTION

PERFORMANCE Dots represent high level of performance.

Edge Profile	Perforation	Item No.	Dimensions (Inches)	NRC with acoustical fleece	NRC with 1" fiberglass infill*	Fire Performance	Light Reflect	Mold & Mildew Protection	Certified Low VOC Emissions	Durability	Recycled Content
METALWORKS™ for DYNAMAX® PLUS Square Lay-in	M1 (Unperforated)	new **6345W24L48M1WHA**	23" x 47"	N/A	N/A	Class A	0.75	•	•	•	•
		new **6345W48L48M1WHA**	47" x 47"	N/A	N/A	Class A	0.75	•	•	•	•
	M19	new **6345W24L48M19WHA**	23" x 47"	0.70 •	0.85 •	Class A	0.75	•	•	•	•
		new **6345W48L48M19WHA**	47" x 47"	0.70 •	0.85 •	Class A	0.75	•	•	•	•

Ceiling panels are specially sized and engineered for the DynaMax and DynaMax Plus suspension systems and must be used with the systems.
These panels do not fit in other suspension systems.
* NRC achieved with acoustical infill (Item 8200T10).

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

Painted

Whitelume (WHA)

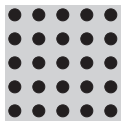
Custom Colors Available

For custom options contact ASQuote, ASQuote@armstrongceilings.com

PERFORATION OPTIONS

(1:2 scale shown)

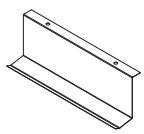
M1 (Unperforated)



M19

ACCESSORIES FOR METALWORKS LAY-IN CEILING PANELS

6483H35 – MetalWorks Lay-In Perimeter Hold-down Clip for DynaMax Plus – Screw attaches to perimeter molding to hold the perimeter cut MetalWorks panels in place. Two clips required per cut panel.



6483H35 – 10 PCS

8200T10 – 1" Fiberglass Infill Bag –
24 × 24 × 1"
Color – Black (gloss)

8200T10 – 12 PCS

PHYSICAL DATA FOR METALWORKS LAY-IN CEILING PANELS

Design Considerations
MetalWorks panels and DynaMax and DynaMax Plus grid are manufactured at separate facilities that use different paint systems. Colors i.e. White and Whitelume will coordinate but are not exact color matches.

Material
All MetalWorks panels: Aluminum - 0.064"

Warranty
One (1) year limited warranty for MetalWorks items. Details at armstrongceilings.com/warranty

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▲ LOCATION DEPENDENT

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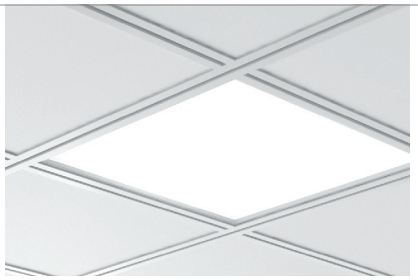
LIGHTING PARTNERS Lighting and diffuser solutions are available through partner companies.

SUSPENSION SYTEMS – DATA CENTERS

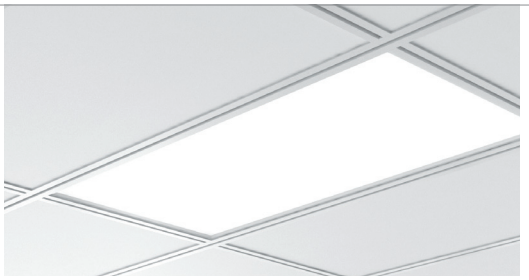
axis

For compatible lighting details, visit axislighting.com

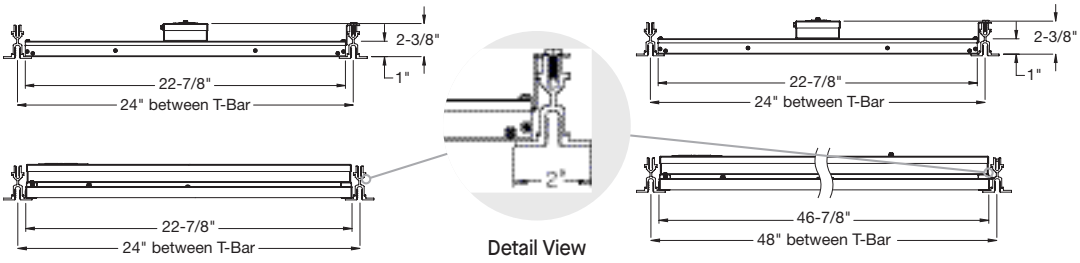
NOTE: Details in this section show standard DynaMax® suspension system; however, Axis TRAYFIT™ 2' × 2' and 2' × 4' are also compatible with DynaMax Plus suspension system.



TRAYFIT™ 2×2



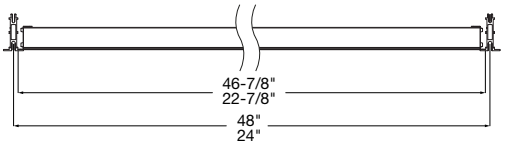
TRAYFIT™ 2×4

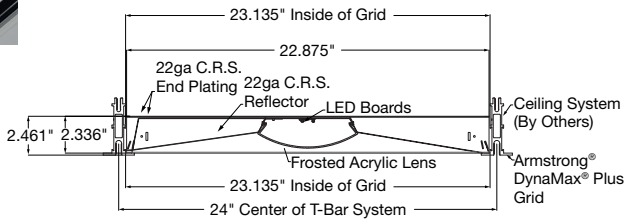


Williams®

For compatible lighting details, visit hew.com/products/PTDC

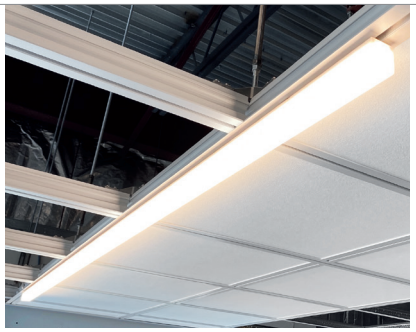
PTDC – Shallow Plenum LED Troffer for DynaMax® and DynaMax Plus System



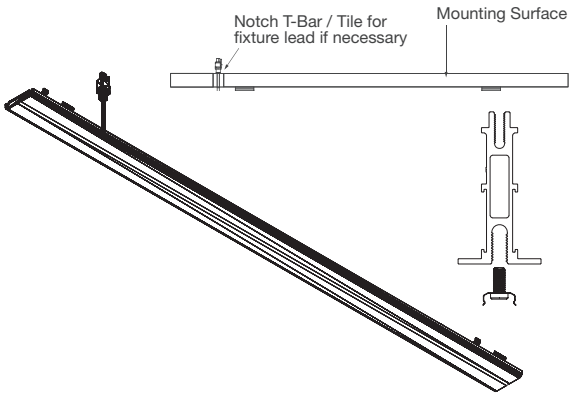


vode

For compatible lighting details, visit vode.com/dynamax



ZipTwo® Data Center Solutions for DynaMax and DynaMax Plus



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50% ALUMINUM RECYCLED CONTENT

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energy management	construction waste mgmt	regional materials	design for flexibility	EPD	recyclable/ extended producer resp.	biobased materials	recycled content	sourcing of raw materials	material ingredient reporting	low emitting/ materials	lighting quality	acoustics
	✓	✓	✓	✓			✓	✓		✓		

▲ LOCATION DEPENDENT

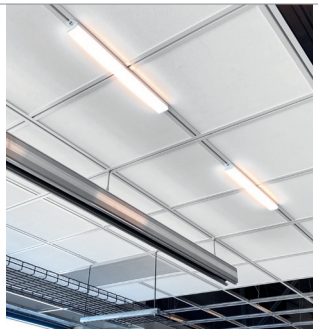
Well Building Standard™ (WELL)
Living Building Challenge® (LBC)

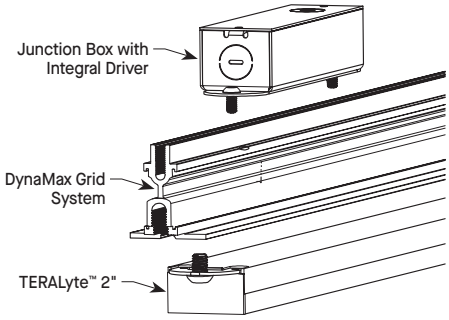
LIGHTING PARTNERS (CONTINUED)

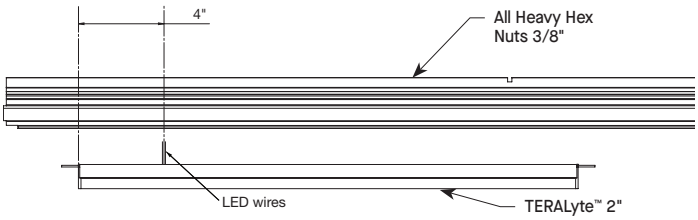
JLC • tech

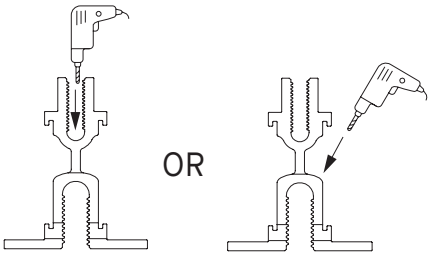
For compatible lighting details, visit jlc-tech.com

NOTE: Details in this section show standard DynaMax® suspension system; however, JLC-Tech TERALyte™ 2" is also compatible with DynaMax® Plus suspension system.





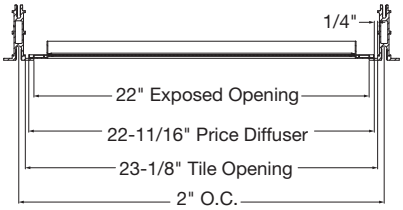


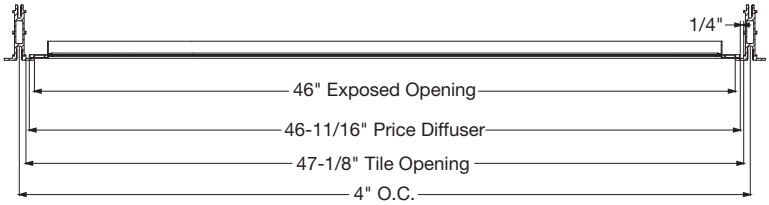


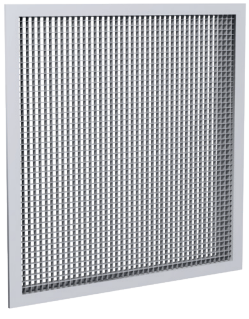
MEP PARTNER

price®

For compatible diffuser details, visit priceindustries.com/diffusers

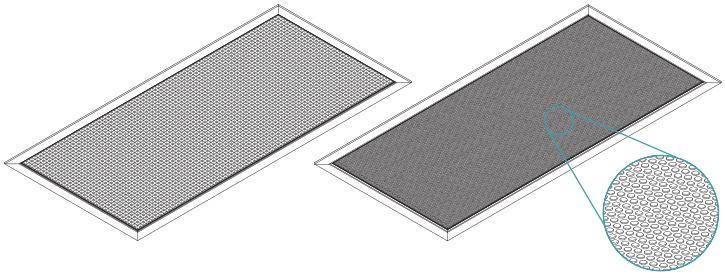






Eggcrate Air Device – Price® Model 80

Perforated Air Device – Price® Model 10



Eggcrate Air Device – Price® Model 80

Perforated Air Device – Price® Model 10

DYNAMAX® Plus

Structural Aluminum Suspension System

SUSTAIN™
High Performance
Sustainable Ceiling Systems

Declare.

LEED® | WELL™ | LBC

50% ALUMINUM RECYCLED CONTENT

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energy management	construction waste mgmt	regional materials	design for flexibility	EPD	recyclable/ extended producer resp.	biobased materials	recycled content	sourcing of raw materials	material ingredient reporting	low emitting/ materials	lighting quality	acoustics
	✓	✓	✓	✓			✓	✓		✓		

▲ LOCATION DEPENDENT

Well Building Standard™ (WELL)
Living Building Challenge® (LBC)

SUSPENSION SYTEMS – DATA CENTERS

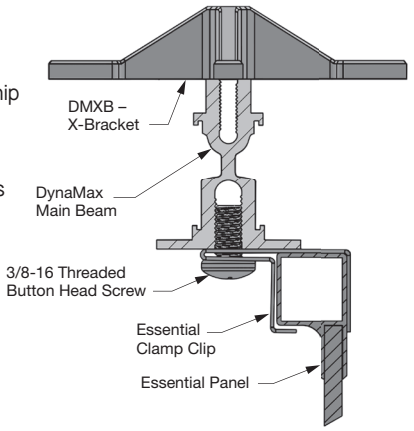
DATA CENTER CONTAINMENT PARTNER

SUBZERO ENGINEERING
A SENNECA COMPANY

For more data center containment details, visit subzeroeng.com

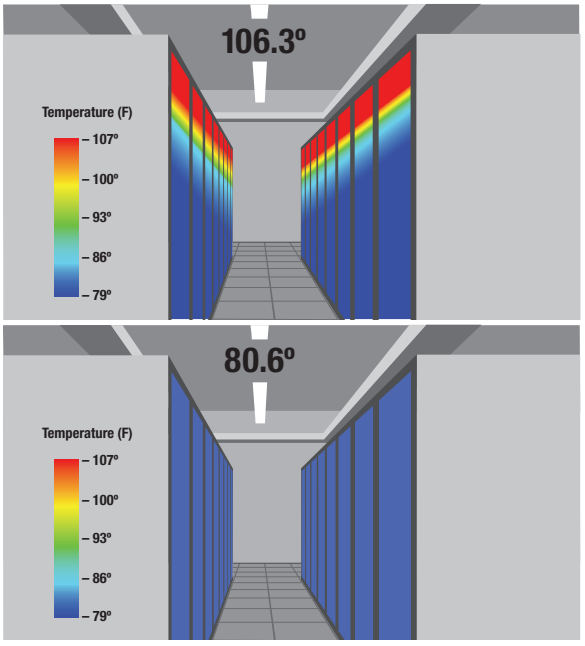
The Subzero Engineering and Armstrong World Industries partnership is the latest development in the portfolio expansion of data center products and services, seamlessly combining structural ceiling solutions with high performing and energy efficient air containment systems.

The Subzero Essential Clamp Clip (shown right) was designed specifically for integrating Subzero Essential Series Wall Panels with DynaMax® and DynaMax® Plus main beams. This provides easier attachment and improved installation efficiency.



NOTE: Detail in this section shows standard DynaMax suspension system; however, Subzero Essential Clamp Clip is also compatible with DynaMax Plus suspension system.

TEMPERATURE AND PRESSURE CONTROL ADVANTAGES



DynaMax and DynaMax Plus structural grid systems provide increased pressure management, reduced leakage, and enables the best hot and cold air containment at the ceiling plane when compared to other ceiling types.

Unlike drilled hole or slotted strut ceilings, the integration of DynaMax and DynaMax Plus grid and Armstrong® Ceiling Panels keeps ceiling planes closed for improved pressure and temperature control where it matters most, such as data center halls.

A 2021 Computational Fluid Dynamics (CFD) simulation showed that, on average, the top of data center cabinet equipment is approx. 26°F warmer when a slotted strut ceiling (top left) is in place and approx. 6°F warmer with drilled hole ceiling (not shown) than with the DynaMax and DynaMax Plus structural grid systems (bottom left).

PHYSICAL DATA

Material
Aluminum

Surface Finish
Baked polyester paint or powder-coated

Manufactured and tested in accordance with ASTM C635 and E3090

Face Dimension
2"

Profile
Exposed tee

Cross Tee/Main Beam Interface
Simple override

End Detail
Main Beam: Butt cut

Cross Tee: Override

Duty Classification
Heavy-duty

System Weight
2' x 2' - 1.63 LBS/SF
2' x 4' - 1.20 LBS/SF

CEILING PANELS PHYSICAL DATA

Ceiling Panels ASTM E1264 Classification
Type XII, Form 2, Pattern E
Fire Class A
500 SF minimum

Pieces/Carton; Square Feet/Carton
4126 – 1.05 LBS/SF; 16 PCS/CTN; 58 SF/CTN
4126BL – 1.05 LBS/SF; 16 PCS/CTN; 58 SF/CTN
4127 – 1.05 LBS/SF; 12 PCS/CTN; 90 SF/CTN
4127BL – 1.05 LBS/SF; 12 PCS/CTN; 90 SF/CTN
2896 – 1.0 LBS/SF; 10 PCS/CTN; 36 SF/CTN
2896BK – 1.0 LBS/SF; 10 PCS/CTN; 36 SF/CTN
2897 – 1.0 LBS/SF; 6 PCS/CTN; 44 SF/CTN
2897BK – 1.0 LBS/SF; 6 PCS/CTN; 44 SF/CTN
4270 – 0.94 LBS/SF; 16 PCS/CTN; 58 SF/CTN
4271 – 0.88 LBS/SF; 8 PCS/CTN; 58 SF/CTN
1807 – 1.08 LBS/SF; 12 PCS/CTN; 44 SF/CTN
1808 – 1.08 LBS/SF; 6 PCS/CTN; 44 SF/CTN
1599 – 1.08 LBS/SF; 12 PCS/CTN; 44SF/CTN
1638 – 1.08 LBS/SF; 6 PCS/CTN; 44 SF/CTN
3210PB – 0.45 LBS/SF; 0.45 LBS/SF; 6 PCS/CTN; 93 SF/CTN

TechLine / 1 877 276-7876
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BPCS-6953-424

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