DYNAMAX® LT

Structural Aluminum Suspension System

DynaMax LT Structural Aluminum Suspension System

This structural aluminum suspension system, ideal for Colocation Data Centers, serves as both a ceiling system and structural component by providing a suspension platform for cable trays, equipment, partitions, and containment barriers – eliminating ceiling penetrations.

KEY SELECTION ATTRIBUTES

- Ideal combination of a finished ceiling system with a structural solution
- Integrates seamlessly with select Armstrong® ceiling panels for a complete ceiling system solution
- Supports up to a 800 lb. point load rating using 3/8"–16 threaded rod at 48" × 48" connection points
- 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
- CNC override feature creates a tight fit minimizing air leakage between plenum and occupied space
- Fully accessible system allows for future expansion and upgrades

- Non-progressive installation gives the ability 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 Warranty; 30-Year Limited System Warranty
- X-Brackets provide attachment points for 48" × 48" suspension from building structure
- 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
- Finished ceiling system offers a containment barrier to protect servers from debris from building structure to below the ceiling plane
- 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 and diffuser options are available from our Data Center lighting and MEP partners

TYPICAL APPLICATIONS

- Colocation Data Centers
- 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

DETAIL

TechLine 877 276-7876
armstrongceilings.com/datacenter

Armstrong® World Industries

DYNAMAX® LT
Structural Aluminum Suspension System

VISUAL SELECTION

	Item No.	Description	Dimensions (Inches) L × W × H
DynaMax® LT Structural Aluminum Suspension System	DM2301	Main Beam	144 × 1-9/16 × 2-1/8"
	DM2320	2' Cross Tee	24 × 1-9/16 × 2-1/8"
	DM2340	4' Cross Tee	48 × 1-9/16 × 2-1/8"
	DM2800	Perimeter Molding	144 × 1-15/32 × 2-1/8"
DynaMax LT Structural Aluminum Suspension System – Factory Gasketed	DM2301GS	Main Beam	144 × 1-9/16 × 2-1/8"
	DM2320GS	2' Cross Tee	24 × 1-9/16 × 2-1/8"
	DM2340GS	4' Cross Tee	48 × 1-9/16 × 2-1/8"
	DM2800GS	Perimeter Molding	144 × 1-15/32 × 2-1/8"

PACKAGING

	PCS/CTN	LF/CTN
DM2301	4	48
DM2320	12	24
DM2340	12	48
DM2800	4	48
DM2301GS	4	48
DM2320GS	12	24
DM2340GS	12	48
DM2800GS	4	48

NOTE: Contact local engineer for job specific load and/or seismic requirements.
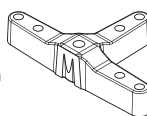
ACCESSORIES

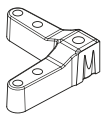**DMXB – X-Bracket** – Used to connect all cross tees together for rigid connection
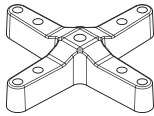
DMXB – 24 PCS

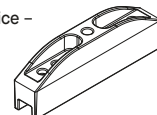**DMTB – T-Bracket** – Used to connect main beams and cross tees to the perimeter extrusion

DMTB – 36 PCS

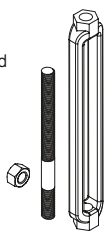**DMLB – L-Bracket** – Used to connect perimeter extrusion corners together

DMLB – 12 PCS

DMMBS – Main Beam Splice – Used to splice together main beam ends
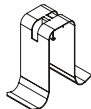
DMMBS – 24 PCS

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
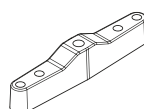
DMHWK – 12 PCS

OPTIONAL ACCESSORIES

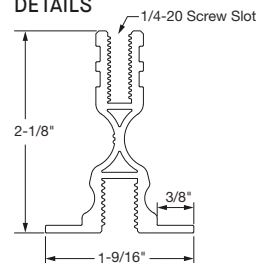**DMHDC – Hold-down Clip** – Attaches to the suspension system to hold Lay-in panels in place

DMHDC – 100 PCS

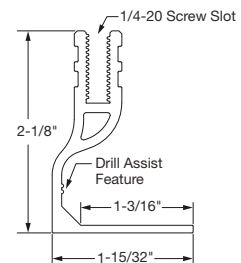**DMIB – I-Bracket** – Used for supplemental hanging locations

DMIB – 24 PCS

DETAILS

1/4-20 Screw Slot

2-1/8"

3/8"

1-9/16"

DynaMax LT Main Beam

1/4-20 Screw Slot

2-1/8"

Drill Assist Feature

1-3/16"

1-15/32"

DynaMax LT Perimeter Molding

LOAD DATA FOR DYNAMAX LT SUSPENSION SYSTEMS

Member Span and Spacing (IN.)	48"	60"	72"
Maximum Allowable Uniform Area Load (LBS/SF)	50	32	22.2
Mid-Span Point Load @ L/360 Deflection (LBS)	160	100	60
Maximum Static Point Load (LBS)	800	800	800
Turnbuckle Maximum Load to Structure (LBS)	1200	1200	1200

For additional load-carrying capability, ask your Armstrong Rep about DynaMax® and DynaMax Plus Structural Grid System.

TechLine 877 276-7876

armstrongceilings.com/datacenter

Armstrong®
World Industries

DYNAMAX® LT

Structural Aluminum Suspension System

RECYCLED CONTENT

UP TO

50%

SUSTAIN™
High Performance
Sustainable Ceiling Systems

Declare.

LEED V5

Ecomedes Data ↗

COMMON MATERIALS FRAMEWORK

Human Health	**Declare Label**	Climate Health	**EPD**
	HPD	Ecosystem Health	**EPD**
	3rd Party CDPH	Circular Economy	✓

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

DYNAMAX® LT SUSPENSION SYSTEM INSTALLATION OVERVIEW

2' and 4' Cross Tee
Structural cross tee connects between main beams and accepts 3/8" - 16 threaded rod

Main Beam
Structural grid main beam

Main Beam Splice
Used to splice together main beams ends

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

Turnbuckles and **Threaded Rods**
Used to connect to X-rackets to create a structural support for the grid

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

Perimeter
Structural perimeter trim

L-Bracket
Used to connect perimeter corners together

DYNAMAX® LT

Structural Aluminum Suspension System

SUSTAIN™
High Performance
Sustainable Ceiling Systems

Declare.

RECYCLED CONTENT
UP TO
50%

LEED V5
Ecomedes Data

COMMON MATERIALS FRAMEWORK

Human Health	**Declare Label**
	HPD
	3rd Party CDPH

Climate Health	**EPD**
Ecosystem Health	**EPD**
Circular Economy	✓

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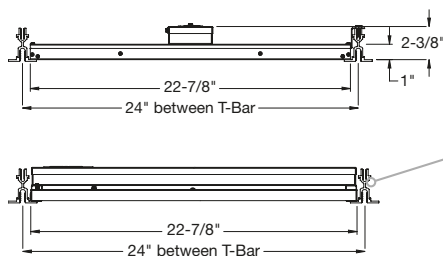Living Building Challenge® (LBC)

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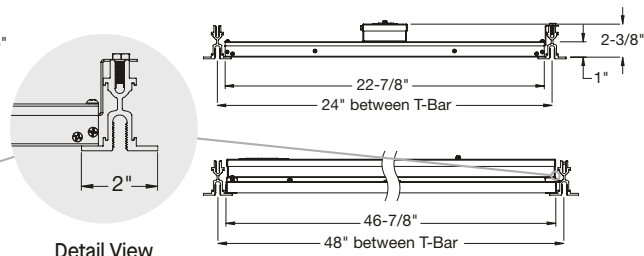
axis

For compatible lighting details,
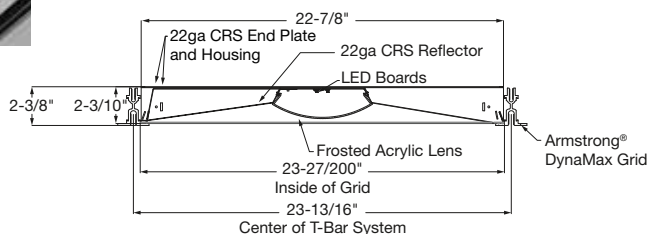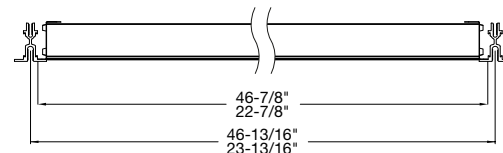visit axislighting.com

TRAYFIT™ 2' × 2'

TRAYFIT™ 2' × 4'

2-3/8"
22-7/8"
24" between T-Bar
1"

22-7/8"
24" between T-Bar

2"
Detail View

2-3/8"
22-7/8"
24" between T-Bar
1"

46-7/8"
48" between T-Bar

Williams®

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

PTDC – Shallow Plenum LED Troffer
for DynaMax® System

46-7/8"
22-7/8"
46-13/16"
23-13/16"

22-7/8"
22ga CRS End Plate
and Housing
22ga CRS Reflector
LED Boards

2-3/8" 2-3/10"

Frosted Acrylic Lens
23-27/200"
Inside of Grid
23-13/16"
Center of T-Bar System

Armstrong®
DynaMax Grid

vode®

For compatible lighting details,
visit vode.com/dynamax

ZipTwo® Data Center Solutions
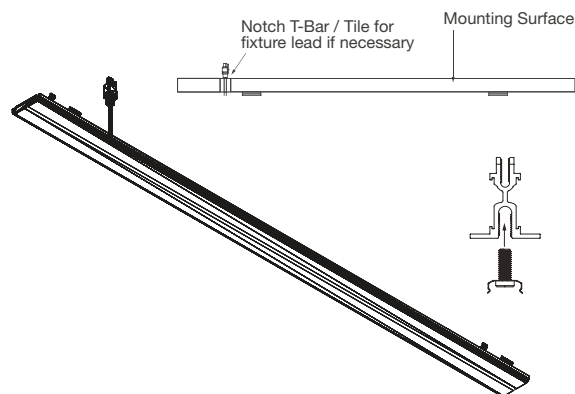
Notch T-Bar / Tile for
fixture lead if necessary

Mounting Surface

SUSTAIN™
High Performance
Sustainable Ceiling Systems

Declare.

RECYCLED CONTENT
UP TO **50%**

LEED V5
Ecomedes Data

COMMON MATERIALS FRAMEWORK

Human Health	**Declare Label**	Climate Health	**EPD**
	HPD	Ecosystem Health	**EPD**
	3rd Party CDPH	Circular Economy	✓

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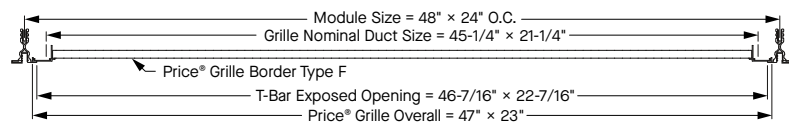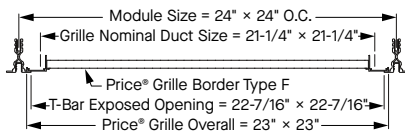Living Building Challenge® (LBC)

LIGHTING PARTNERS (CONTINUED)

JLC • tech

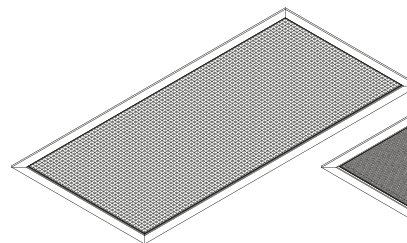For compatible lighting details,
visit jlc-tech.com

Junction Box with Integral Driver

DynaMax® Grid System

TERALyte™ 2"

4"

All Heavy Hex Nuts 3/8"

LED wires

TERALyte™ 2"

OR

MEP PARTNER

price®

For compatible diffuser details,
visit priceindustries.com/diffusers

Module Size = 24" × 24" O.C.
Grille Nominal Duct Size = 21-1/4" × 21-1/4"
Price® Grille Border Type F
T-Bar Exposed Opening = 22-7/16" × 22-7/16"
Price® Grille Overall = 23" × 23"

Module Size = 48" × 24" O.C.
Grille Nominal Duct Size = 45-1/4" × 21-1/4"
Price® Grille Border Type F
T-Bar Exposed Opening = 46-7/16" × 22-7/16"
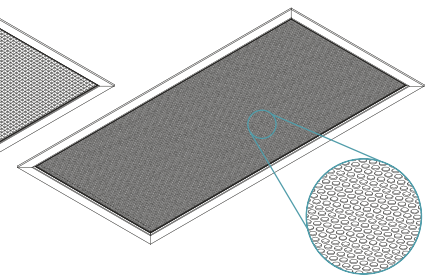Price® Grille Overall = 47" × 23"

Eggcrate Air Device –
Price® Model 80 Border F

Perforated Air Device –
Price® Model 10 Border F

Eggcrate Air Device –
Price® Model 80 Border F

Perforated Air Device –
Price® Model 10 Border F

DYNAMAX® LT
Structural Aluminum Suspension System

TEMPERATURE AND PRESSURE CONTROL ADVANTAGES

DynaMax 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 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 structural grid systems (bottom left).

SUSPENSION SYSTEMS – DATA CENTERS

RECYCLED CONTENT

UP TO

87%

SUSTAIN®
High Performance
Sustainable Ceiling Systems

Declare.

LEED V5

Ecomedes Data ⧉

COMMON MATERIALS FRAMEWORK

Human Health	**Declare Label**	Climate Health	EPD
	HPD	Ecosystem Health	EPD
	3ʳᵈ Party CDPH	Circular Economy	✔
OCCUPANT EXPERIENCE		Acoustics	✔

new # Ceiling Panels for DYNAMAX® LT
Square Lay-in

DataZone™ panels with DynaMax® suspension system

Ceiling panels for DynaMax are specifically designed for performance, reliability, and sustainability in data center and critical application environments.

KEY SELECTION ATTRIBUTES

DataZone™ and Ultima® AirAssure® for DynaMax®

- DataZone and Ultima AirAssure panels are part of the Sustain® portfolio, and meet the most stringent industry sustainability compliance standards today

- Get total noise control and floor plan versatility with Total Acoustics® ceiling panels: NRC + CAC = Total Acoustics performance

- Smooth, clean, durable finish – Washable, Impact-resistant, scratch-resistant, and soil-resistant

- Mold- and mildew-resistant surface

- 30-Year Limited System Warranty against visible sag, mold, and mildew

- Made in the U.S.A. of domestic and global content

- Build America, Buy America (BABA) Act compliant

Ultima® AirAssure® for DynaMax®

- Factory gasketed Ultima® AirAssure® panels for DynaMax®, DynaMax® LT, and DynaMax® Plus grid reduces air leakage and contributes to annual energy savings

Ceiling panels are specially sized and engineered for the DynaMax® suspension systems and must be used with these systems. These panels do not fit in other suspension systems.

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

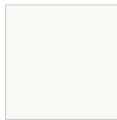**Painted**

DataZone™ for DynaMax®

White (WH)	Black (BK)

Ultima® AirAssure® for DynaMax®

White (WH)

DETAILS

1. DataZone™ for DynaMax®
2. Ultima® AirAssure® for DynaMax®

SUSPENSION SYSTEMS – DATA CENTERS

Ceiling Panels for DYNAMAX® LT
Square Lay-in

RECYCLED CONTENT UP TO **87%**

LEED V5

Ecomedes Data ↗

COMMON MATERIALS FRAMEWORK			
Human Health	**Declare Label**	Climate Health	**EPD**
	HPD	Ecosystem Health	**EPD**
	3ʳᵈ Party CDPH	Circular Economy	✅
OCCUPANT EXPERIENCE			
		Acoustics	✅

VISUAL SELECTION

PERFORMANCE Dots represent high level of performance.

Edge Profile		Item No.	Dimensions (Inches)	Sound Absorption NRC	Sound Blocking CAC	Total Acoustics¹ NRC/CAC	Fire Performance	Light Reflect*	Mold & Mildew Protection (Bio-Block)	Sag Resistant (Humi-Guard+)	Certified Low VOC Emissions	Durability	Recycled Content	Recycle Program	30-Yr Warranty
DataZone™ for DYNAMAX® Square Lay-in	new	1508	23-1/4 × 23-1/4 × 3/4"	0.75	35	**BETTER**	Class A	0.82	•	•	•	Std	•	•	•
	new	1508BK	23-1/4 × 23-1/4 × 3/4"	0.75	35	**BETTER**	Class A	N/A	•	•	•	Std	•	•	•
	new	1509	23-1/4 × 47-1/4 × 3/4"	0.75	35	**BETTER**	Class A	0.82	•	•	•	Std	•	•	•
	new	1509BK	23-1/4 × 47-1/4 × 3/4"	0.75	35	**BETTER**	Class A	N/A	•	•	•	Std	•	•	•
	new	1566	23-1/4 × 23-1/4 × 3/4"	0.90	N/A	N/A	Class A	0.82	•	•	•	Std	•	•	•
	new	1566BK	23-1/4 × 23-1/4 × 3/4"	0.90	N/A	N/A	Class A	N/A	•	•	•	Std	•	•	•
	new	1567	23-1/4 × 47-1/4 × 3/4"	0.90	N/A	N/A	Class A	0.82	•	•	•	Std	•	•	•
	new	1567BK	23-1/4 × 47-1/4 × 3/4"	0.90	N/A	N/A	Class A	N/A	•	•	•	Std	•	•	•
	new	1568	47-1/4 × 47-1/4 × 1"	0.90	N/A	N/A	Class A	0.82	•	•	•	Std	•	•	•
ULTIMA® AirAssure® for DYNAMAX Square Lay-in		1599	23-1/4 × 23-1/4 × 3/4"	0.75	35	**BETTER**	Class A	0.88 •	•	•	•	•	•	•	•
		1638	23-1/4 × 47-1/4 × 3/4"	0.75	35	**BETTER**	Class A	0.88 •	•	•	•	•	•	•	•

Ceiling panels are specially sized and engineered for the DynaMax suspension systems and must be used with the systems. These panels do not fit in other suspension systems.

* Advertised values for light reflectance are applicable to white tiles only.

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+)

Armstrong®
World Industries

DYNAMAX® LT
Structural Aluminum Suspension System

DynaMax® LT with DataZone™ Square Lay-in Panels

PHYSICAL DATA FOR DYNAMAX® SUSPENSION SYSTEMS

Material
Aluminum

Surface Finish
Baked polyester paint or powder-coated

Manufactured and tested in accordance with ASTM C635 and E3090

Face Dimension
1.560"

Profile
Exposed tee

Cross Tee/Main Beam Interface
Override

End Detail
Main Beam: Butt cut
Cross Tee: Override

Duty Classification
Heavy-duty

System Weight
2' × 2' - 0.84 LBS/SF
2' × 4' - 0.62 LBS/SF

PHYSICAL DATA FOR DATAZONE™ AND ULTIMA® AIRASSURE® CEILING PANELS

Material
Wet-formed mineral fiber with DuraBrite® acoustically transparent membrane and polyethylene foam (Items 1599 and 1638)

Wet-formed mineral fiber with acoustically transparent membrane (Items 1508, 1508BK, 1509, 1509BK, 1564, 1564BK, 1565, and 1565BK)

Fiberglass with DuraBrite® acoustically transparent membrane (Items 1566, 1566BK, 1567, 1567BK, and 1568)

Surface Finish
Acoustically transparent membrane with factory-applied latex paint

DuraBrite scrim with factory-applied latex paint (Items 1599, 1638, 1566, 1566BK, 1567, 1567BK, and 1568)

Fire Performance
Class A: ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index of 25 or less. Smoke Developed Index of 50 or less (UL® labeled).

ASTM E1264 Classification
Type A, Form A2.2, Pattern E; Fire Class A (Items 1599 and 1638)

Type A, Form A2.2, Pattern G; Fire Class A (Items 1508, 1508BK, 1509, 1509BK, 1564, 1564BK, 1565, and 1565BK)

Type B, Form B2, Pattern G; Fire Class A (Items 1566, 1566BK, 1567, 1567BK, and 1568)

Humidity/Sag Resistance
HumiGuard® Plus ceiling panels are recommended for areas subject to high humidity, up to, but not including, standing water and outdoor applications.

Anti-Mold/Mildew
Ceiling tiles with BioBlock® performance resist the growth of mold and mildew on the tile surface.

VOC Emissions
Third-party certified compliant with California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017. This standard is the guideline for low emissions in LEED®, WELL Building Standard™, Living Building Challenge® (LBC), CalGreen Title 24, ANSI/ASHRAE/USGBC/IES Standard 189; ANSI/GBI Green Building Assessment Protocol.

High Recycled Content
Contains greater than 50% total recycled content. Total recycled content based on product composition of post-consumer and pre-consumer (post-industrial) recycled content per FTC.

Insulation Value
1508, 1508BK, 1509, 1509BK, 1599, and 1638:
R Factor – 2.2 (BTU units); R Factor – 0.39 (Watts units)
1566, 1566BK, 1567, 1567BK, and 1568:
R Factor – 4.0 (BTU units); R Factor – 0.7 (Watts units)

30-Year Performance Guarantee & Warranty
When installed with Armstrong® Suspension System.
Details at armstrongceilings.com/warranty

Weight; Square Feet/Carton
1508, 1508BK, 1509, 1509BK – 1.08 LBS/SF; 48 SF/CTN
1566 – 0.44 LBS/SF; 90.09 SF/CTN
1566BK – 0.44 LBS/SF; 45.05 SF/CTN
1567, 1567BK – 0.44 LBS/SF; 91.55 SF/CTN
1568 – 0.44 LBS/SF; 93 SF/CTN
1599 – 1.08 LBS/SF; 12 PCS/CTN; 44 SF/CTN
1638 – 1.08 LBS/SF; 6 PCS/CTN; 44 SF/CTN

Minimum Order Quantity
1 carton

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