Data Center Design: STRENGTH Where you need it most

Data Centers come with their own set of design challenges. See how we’ve made it easier to get the high-strength solutions you need for your unique project.

4 DYNAMAX™ STRUCTURAL ALUMINUM SUSPENSION SYSTEM

6 CONTINUOUS LOAD PATH (CLP) FOR PRELUDE® XL®

8 PRELUDE® XL MAX® 15/16” SUSPENSION SYSTEM

10 HIGH PERFORMANCE CEILING PANEL SELECTIONS
Provides an attachment platform for cable trays, equipment partitions, and hot and cold containment barriers from the structure to below the ceiling plane while eliminating penetrations through the ceiling.

- Provides a suspension platform or attachment for data center cable trays, equipment, partitions, and hot and cold containment barriers from building structure to below the ceiling plane
  - Finished ceiling system offers a containment barrier to protect servers from debris
  - Easy integration into a conventional grid system using AXTBC clip and DynaMax boss channels
- DynaMax suspension system can integrate seamlessly with Armstrong® ceiling panels for a complete ceiling system solution
- Lighting integration solutions available
- Supports up to a 900 lb. point load rating using 3/8" threaded rod at 4 x 4’ connection points
- Factory cut notches on main beams for a faster and easier installation
- Grid system has continuous threaded boss channel, allowing 3/8" threaded rod to be installed to the suspension system at any location
- Controls airflow by eliminating penetrations
- Available in 2 x 2’, 2 x 4’ and 4 x 4’ 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
- Cross tees not bearing any load are removable for plenum access without compromising the structural integrity of the system
- 10-year limited Warranty
DYNAMAX™ Suspension System

How It Works

Turnbuckles and threaded rods are used to connect to X-brackets to create a structural support for the grid.

I-Bracket
Used to splice together main beams ends.

L-Bracket
Used to connect perimeter extrusion corners together.

2 Ft. and 4 Ft. Cross tee
Structural Cross tee connect between mainbeams and accepts 3/8-16 threaded rod.

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

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

Main Beam
Structural grid main beam.

Perimeter
Structural perimeter trim.

Cable tray by other

DYNAMAX™ Suspension System

Additional hardware
Turnbuckle and threaded rod.
The CLP 6” main beam component integrates with Prelude® XL® suspension system, creating a pathway for the threaded rod to pass through the ceiling plane without unwarranted air penetration.

- Allows a threaded rod to connect to the deck without interrupting the ceiling plane
- Designed to accommodate 1/2” and 3/8” threaded rods with point loads of up to 1,800 lbs per 3/8” threaded rod and up to 3,300 lbs per 1/2” rod with no weight transferred to the ceiling system
- Provides flexibility to design data halls that require heavier loads by using standard Prelude® XL® ceiling system in main or high load trunk lines
- Helps to manage air flow without unwarranted air penetrations in the ceiling grid or panels
- Reduce number of hanger wires

NOTE: The load is completely supported by the threaded rod to the deck and is not transferred to the suspension system. The CLP with coordinating 7’-6” and 9’-6” main beams creates typical 8’ and 10’ layouts.
Continuous Load Path (CLP)

How It Works

XL7328/XL73248
Prelude® XL® 2ft and 4ft 15/16” Cross tee connect main beams together

CLP7301 Continuous Load Path Clip
Used to create a path for load to be continuously transferred through the ceiling system

7376
CLP 7’-6” main beam creates an 8’ spacing between rods

Rod Drop Points
8’ x 4’ spacing

Cable tray by other
Integrated hanging clips allow connection to 3/8" threaded rod for flexible and reconfigurable overhead cable tray and electrical distribution without a separate strut channel system.

**PRELUDE® XL MAX®**

The Prelude® XL MAX® suspension system supports single point loads up to 300 lbs. for cable trays, busways, hot aisle containment, and more.

Load connector clips attach to the face of the suspension system to eliminate unsightly threaded rod penetrations through the ceiling plane minimizing unwanted air infiltration while improving access, cable tray layout options, and aesthetics.
PMLC – Prelude® XL Max®
Load Connector
Used to support bus bars, cable trays, hot aisle containment, and other components with 3/8” threaded rod along the suspension system face

PMHC – Prelude® XL Max® Hanging Clip
Used to carry the system with 3/8” threaded rod along the main and at intersections over the IJC

Main Beam
Cross Tee

PMLC Clip
#8 x 1/2” long Truss Head Sharp Point Screw
3/8–16” Threaded Rod

PMHC – Prelude® XL Max® Hanging Clip
Used for carrying the ceiling system with 3/8” threaded rod from any location along the main beam when plenum obstructions prevent installation at the main beam cross tee intersection.

6” Max

TLMBS – Top Lock Main Beam Splice Clip
Locks two main beams together for a secure connection.
*Must be within 6” of a PMHC

Prelude XL Max Main Beams and Cross Tees
15/16” face double bulb suspension system provides maximum load carrying capacity and Seismic D, E, F performance

IJC – Intersection Joint Clip
Used to connect all cross tees together for rigid connection

IHC – Intersection Hanging Clip
3/8–16” Heavy Hex Locknut
Included with IHC; do not substitute.

IHC – Intersection Hanging Clip Installation
Make sure that the head of the rivet goes through the XL clip. The expanded portion of the rivet needs to expand on the IHC clip.

Blind Steel Pop Rivets
1/8” Dia. x .337” Long
.126” – .186” Grip Range
Shear Strength: 260 lbs.

Included with SHC; do not substitute.

SHC – Supplemental Hanging Clip
3/8–16” Heavy Hex Nut
Included with SHC; do not substitute.

SHC Clip

SHC – Supplemental Hanging Clip Installation
3/8–16” Threaded Rod
3/8–16” Heavy Hex Nut
Included with SHC; do not substitute.

SHC – Supplemental Hanging Clip Installation

3/8–16” Heavy Hex Locknut
Included with PMLC; do not substitute.

PMLC Clip
13/64” Dia. x 4” Long
0.109” Grip Range
Shear Strength: 200 lbs.

Included with PMLC; do not substitute.

PMLC – Prelude® XL Max®
Load Connector
Used to support bus bars, cable trays, hot aisle containment, and other components with 3/8” threaded rod along the suspension system face

3/8” threaded rod to structure (4’ O.C. or as required)

All Heavy Hex 3/8” Nuts

PMHC – Prelude® XL Max® Hanging Clip
Used to carry the system with 3/8” threaded rod along the main and at intersections over the IJC

IJC – Intersection Joint Clip
Used to connect all cross tees together for rigid connection

Prelude XL Max Main Beams and Cross Tees
15/16” face double bulb suspension system provides maximum load carrying capacity and Seismic D, E, F performance

PRELUDE®
XL MAX®

How It Works
### VISUAL SELECTION

#### Ceiling Panels for DYNAMAX Data Center Ceiling Systems

<table>
<thead>
<tr>
<th>Edge Profile</th>
<th>Item No.</th>
<th>Description</th>
<th>Dimensions Actual (Inches)</th>
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</thead>
<tbody>
<tr>
<td>Square Lay-in</td>
<td>4126</td>
<td>Fine Fissured™ 23 x 23 x 5/8”</td>
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<td></td>
<td>4126BL</td>
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<td>4127</td>
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<tr>
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<td>Calla 23 x 23 x 1”</td>
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<td>2896BK</td>
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<td>4270</td>
<td>Dune™ 23 x 23 x 5/8”</td>
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### PERFORMANCE SELECTION

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<tr>
<th>UL Classified Acoustics</th>
<th>Total Acoustics</th>
<th>Fire Performance</th>
<th>Light Reflect</th>
<th>Anti-Mold &amp; Mildew</th>
<th>Sag Resist</th>
<th>Certified Low VOD Emissions</th>
<th>Durability</th>
<th>Recycled Content</th>
<th>Recycled Program</th>
<th>10-Yr Warranty</th>
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#### Notes

- These panels are specially sized and engineered for the DynaMax™ suspension system and must be used with the system. These panels do not fit in other suspension systems.
## VISUAL SELECTION

### PRELUDE® XL MAX™ Square Lay-in

<table>
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<th>Description</th>
<th>Dimensions Nominal (Inches)</th>
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<tbody>
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1 877 276 7876
Customer Service Representatives
7:45 a.m. to 5:00 p.m. EST Monday through Friday

TechLine – Technical information, detail drawings, CAD design assistance, installation information, other technical services – 8:00 a.m. to 5:30 p.m. EST, Monday through Friday. FAX 1 800 572 8324
or email: techline@armstrongceilings.com

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