



**Armstrong**® World Industries

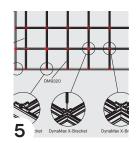
Data Center Solutions

# 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.



DynaMax® and DynaMax® Plus Structural Aluminum Suspension Systems



Suspension System Installation and Layout Overview



Lighting, Diffuser, and Containment Partners



MetalWorks<sup>™</sup> Panels for DynaMax and DynaMax Plus



High Performance Ceiling Panels for DynaMax and DynaMax Plus



Continuous Load Path (CLP) for Prelude® XL®



Prelude® XL Max® 15/16" Suspension System

DynaMax Structural Aluminum Grid ▶



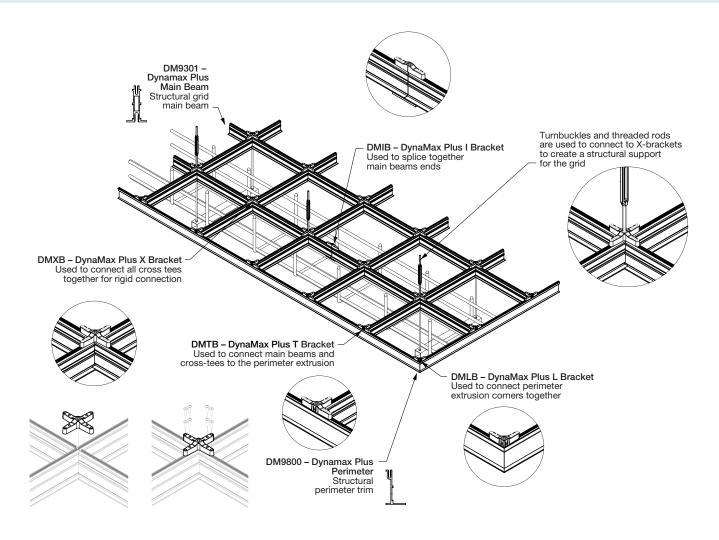


# DynaMax® & DynaMax® Plus Suspension Systems

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.

KEY SELECTION ATTRIBUTES	DynaMax Structural Grid	DynaMax Plus Structural Grid
Ideal combination of a finished ceiling system with a structural solution		
Easy integration into a conventional grid system using AXTBC clip and DynaMax® boss chann	els ·	•
Integrate seamlessly with select Armstrong® ceiling panels for a complete ceiling system solu	ıtion •	•
Supports up to a 1,200 lb. point load rating using 3/8"-16 threaded rod at 48" × 48" connection	on points •	•
Factory-cut notches on main beams for faster and easier installation		•
Factory gasketing available upon request		•
Suspension system has continuous threaded boss channel, allowing 3/8"-16 threaded rod to to the suspension system at any location	be installed .	•
X-Brackets attachment points for 48" × 48" suspension from building structure	•	•
Available in 24" $\times$ 24", 24" $\times$ 48", and 48" $\times$ 48" suspension system layouts	•	•
Fully accessible system allows for future expansion and upgrade	•	•
Non-progressive installation gives the ability to remove or replace a section of the system winned to dismantle those components around it	thout the .	•
Cross tees not bearing any load are removable for plenum access without compromising the integrity of the system	structural .	•
10-Year Limited Suspension System Warranty; 30-Year Limited Ceiling System Warranty		•
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		•
Eliminate 1/3 or 1/2 of threaded rods/accessories utilized today for typical 48" hanging spans	5	•
Supports point loads of up to 1,090 lbs. at the mid-point of 4' spans (up to 1,850 lbs. for stati	ic point loads)	
DATA CENTER-SPECIFIC ATTRIBUTES		
Provides a suspension platform or attachment for data center cable trays, equipment, partition hot and cold aisle containment barriers from building structure to below the ceiling plane	ons and .	
Finished ceiling system offers a containment barrier to protect servers from debris	•	•
Controls airflow by eliminating ceiling penetrations	•	•
Grid provides increased temperature and pressure management, reduced leakage, and enablest hot and cold air containment at the ceiling plane when compared to other ceiling types	oles the .	•
Available with Ultima® AirAssure® panels with factory-gasketed edges to provide even greater and pressure management	r temperature .	•
Lighting, diffuser, and containment options are available from our Data Center lighting and MI	EP partners •	•

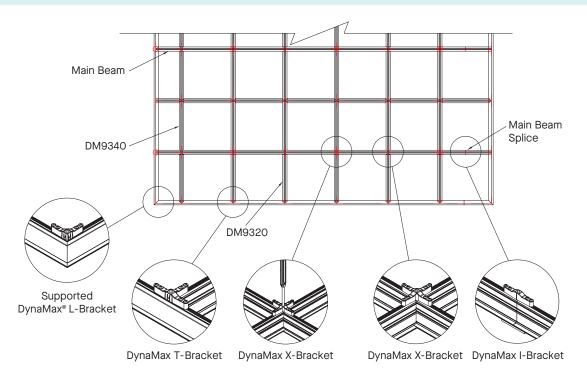
### DynaMax® & DynaMax® Plus Suspension Systems How It Works



NOTE: Although the installation layout above is shown with DynaMax Plus grid system details, the same layout and brackets are used with the standard DynaMax system.

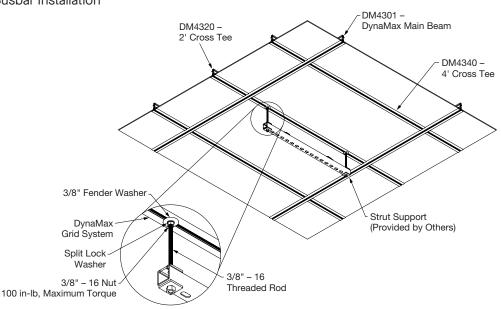
# DynaMax® & DynaMax® Plus Suspension Systems

Installation and Layout Overview



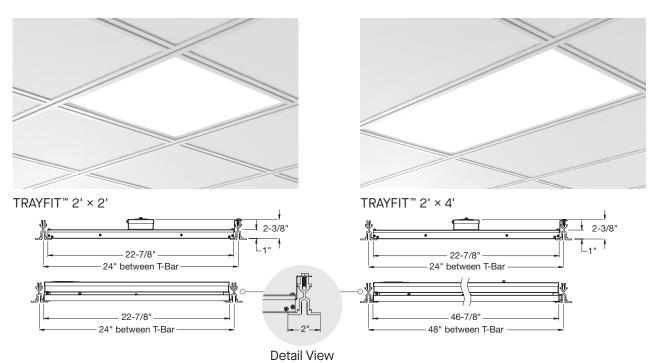
NOTE: DynaMax Plus threaded rod drops can be spaced at increased spans of 6' or 8' due to the system's greater load-carrying capability.

#### DynaMax Busbar Installation



# DynaMax® & DynaMax® Plus Integrated Lighting Solutions

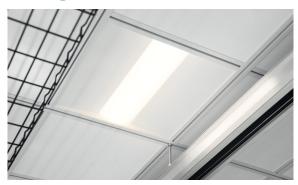




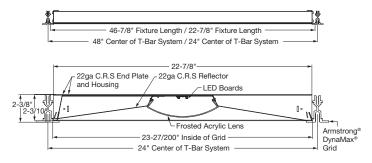
For compatible lighting details, visit axislighting.com



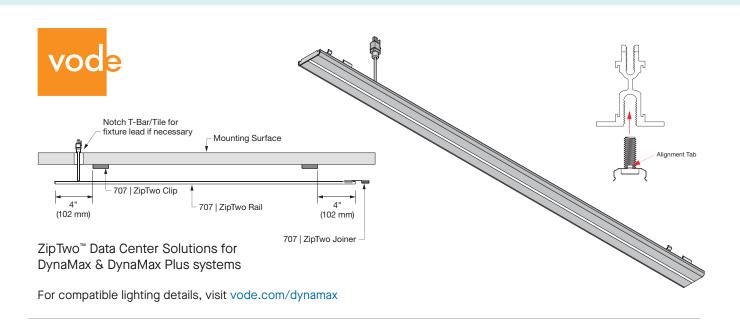
NOTE: In the section that follows, standard DynaMax grid is featured in the partner drawings; however, these partner solutions are all compatible with DynaMax Plus grid.

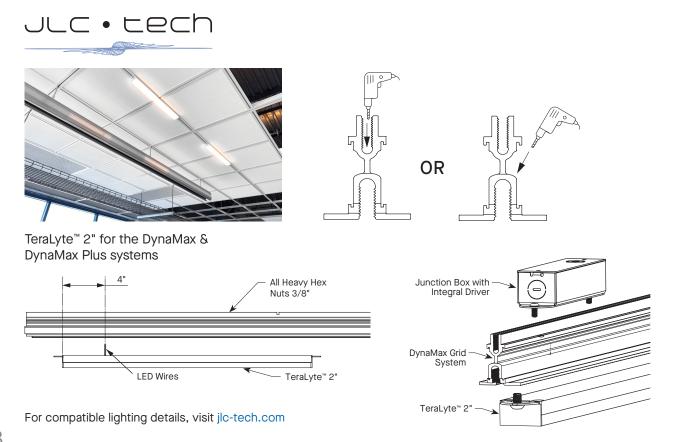


PTDC – Shallow Plenum LED Troffer for DynaMax & DynaMax Plus Systems



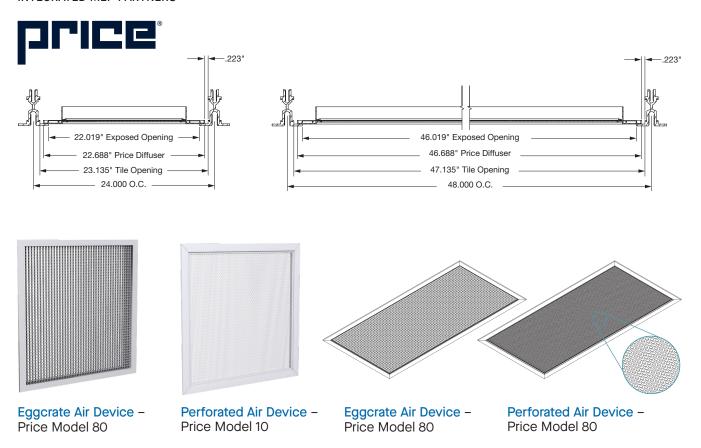
# DynaMax® & DynaMax® Plus Integrated Lighting Solutions





## DynaMax® & DynaMax® Plus Additional Solution Partners

#### INTEGRATED MEP PARTNERS



For compatible diffuser details, visit priceindustries.com/diffusers



### High Performance

MetalWorks™ Ceiling Panel Selections for DynaMax® & DynaMax® Plus Suspension Systems

	VISUAL SELEC	TION		PERFORMANCE Dots represent high level of performance.										
few.	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		
	METALWORKS" for DYNAMAX® & DYNAMAX PLUS Square Lay-in		6345W24L48M1WHA	23" × 47"	N/A	N/A	Class A	0.75	٠	٠	٠	•		
		M1 (Unperforated)	6345W48L48M1WHA	47" × 47"	N/A	N/A	Class A	0.75	٠	٠	٠			
		• • • • •	6345W24L48M19WHA	23" × 47"	0.70	0.85	Class A	0.75	٠	٠	٠	•		
		M19	6345W48L48M19WHA	47" × 47"	0.70	0.85	Class A	0.75	•	•	•	•		

NOTE: 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. For additional info, please contact your local Armstrong rep.

\* NRC achieved with acoustical infill (Item 8200T10).

## High Performance

### Ceiling Panel Selections for DynaMax® & DynaMax® Plus Suspension Systems

VISUAL SELECTION				PERFORMANCE SELECTION Dots represent high level of performance.											
Edge Profile	Item No.	Dimensions (Inches)	Sound Absorption	Sound Blocking	Total Acoustics1	Articulation Class	Fire Performance	Light Reflect	Mold & Mold & Mildew Protection	Sag + Pusned + Resistant	Certified Low VOC Emissions	Durability	Recycled Content	Recycle Program	30-Yr Warranty
FINE FISSURED™ for DYNAMAX® & DYNAMAX PLUS	4126	23-1/4 × 23-1/4 × 5/8"	0.55	35	N/A	N/A	Class A	0.82	•	•	•	Std	Std	•	•
Square Lay-in	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® & DYNAMAX PLUS	2896	23-1/4 × 23-1/4 × 1"	0.85	35	BEST	170	Class A	0.85	•	•	•	•	•	•	•
Square Lay-in	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® & DYNAMAX PLUS	4270	23-1/4 × 23-1/4 × 5/8"	0.50	35	N/A	N/A	Class A	0.85	•	•	•	•	•	•	•
Square Lay-in	4271	23-1/4 × 47-1/4 × 5/8"	0.50	35	N/A	N/A	Class A	0.85	•	•	•	•	•	•	•
ULTIMA® for Dynamax® & Dynamax Plus	1807	23-1/4 × 23-1/4 × 3/4"	0.75	35	BETTER	170	Class A	0.88	•	•	•	•	•	•	•
Square Lay-in	1808	23-1/4 × 47-1/4 × 3/4"	0.75	35	BETTER	170	Class A	0.88	•	•	•	•	•	•	•
ULTIMA® AIRASSURE® for DYNAMAX® &	1599	23-1/4 × 23-1/4 × 3/4"	0.75	35	BETTER	N/A	Class A	0.88	•	•	•	•	•	•	•
DYNAMAX PLUS Square Lay-in	1638	23-1/4 × 47-1/4 × 3/4"	0.75	35	BETTER	N/A	Class A	0.88	•		•	٠	•	•	•
OPTIMA® PB for DYNAMAX® & DYNAMAX PLUS Square Lay-in	3210PB	47-5/16 × 47-5/16 × 1"	0.95	N/A	N/A	•	Class A		·	•	٠	•	•	٠	•

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

Total Acoustics® ceiling panels have an ideal combination of noise reduction and sound blocking performance 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+)



### Continuous Load Path (CLP)

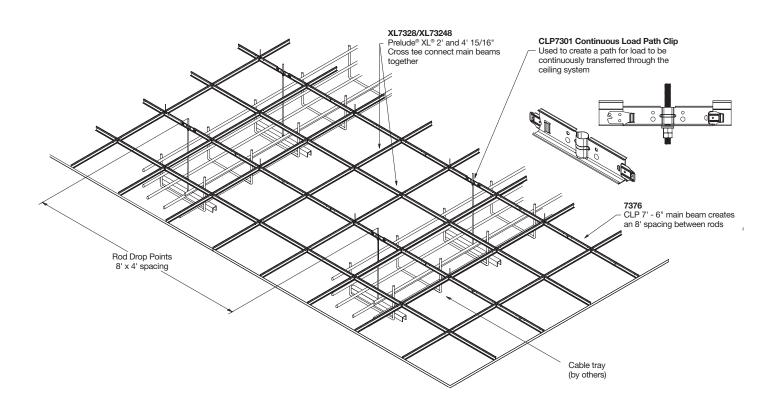


NOTE: The load is completely supported by the threaded rod to the deck and is not transferred to the suspension system. The CLP with coordinating 7'-6" and 9'-6" main beams creates typical 8' and 10' layouts.

The CLP 6" main beam component integrates with the 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
- Reduces number of hanger wires

### Load Path (CLP) How It Works







# Prelude® XL Max®

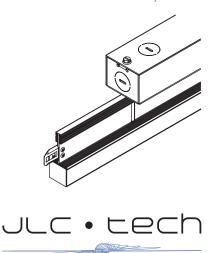
The Prelude® XL Max® suspension system supports single point loads up to 300 lbs. for cable trays, busbars, hot aisle containment, and more.

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.

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.

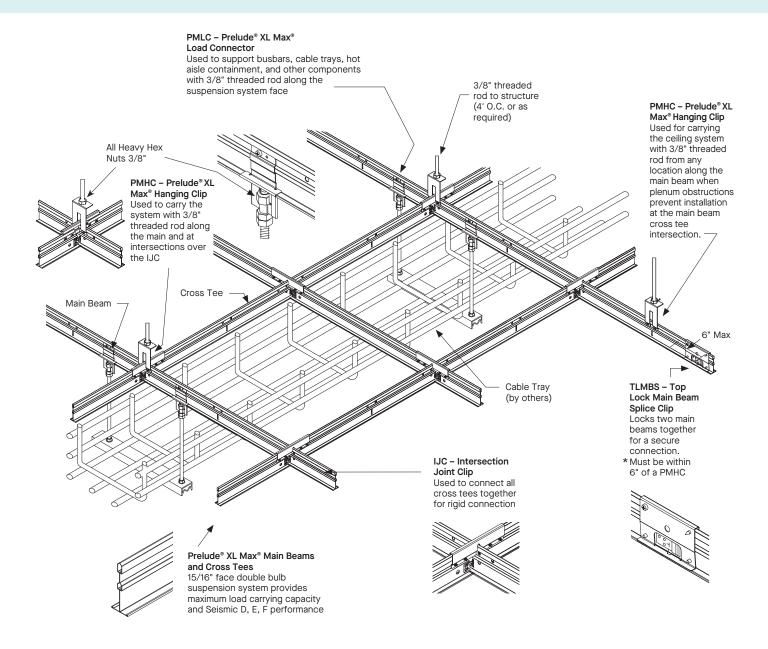
### Prelude XL Max Lighting Solutions

TeraLyte<sup>™</sup> 1" for Prelude XL Max System





# Prelude® XL Max® How It Works



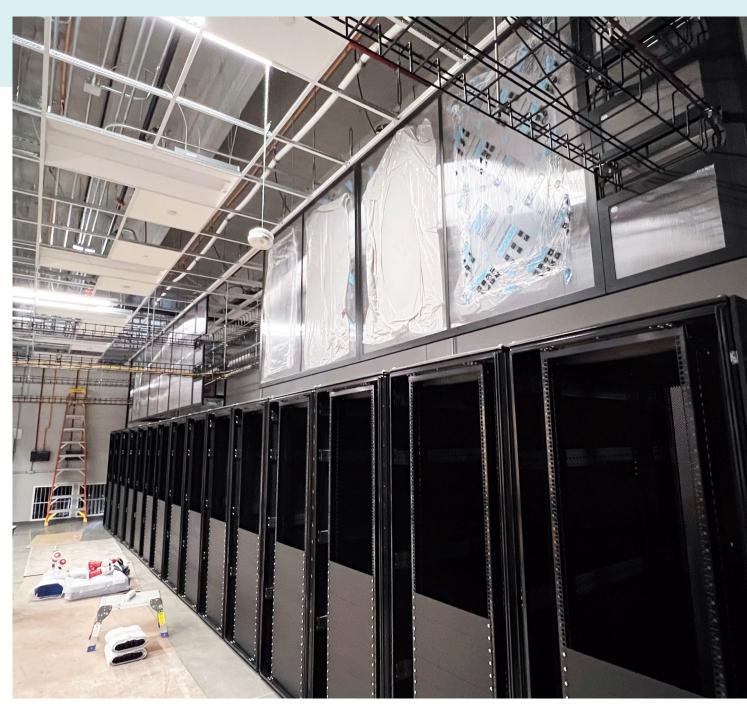
### High Performance

### Ceiling Panel Selections for Prelude® XL Max® Suspension Systems

VISUAL SELECTION			PERFORMANCE SELECTION Dots represent high level of performance.												
	Item No.	Dimensions (Inches)	Sound Absorption +	Sound Blocking	S+8 Total Acoustics1	া)নৈ Articulation Class	Fire Performance	Light Reflect		Sag Resistant +brand	Certified Low VOC Emissions	Durability	Recycled Content	Recycle Program	30-Yr Warranty
CANYON® for Prelude® XL Max® Square Lay-in	1488	23-13/16 × 23-13/16 × 5/8"	0.65	35 •	GOOD ())))	N/A	Class A	0.80	•	•	•	٠	Std	•	•
	1489	23-13/16 × 47-13/16 × 5/8"	0.65	35	GOOD ()))	N/A	Class A	0.80	•	•	•	٠	Std	•	•
ULTIMA® for Prelude® XL Max® Square Lay-in	1927	23-13/16 × 23-13/16 × 3/4"	0.75	35 •	BETTER	170	Class A	0.88	•	•		٠	٠	•	•
	1928	23-13/16 × 47-13/16 × 3/4"	0.75	35 •	BETTER	170	Class A	0.88	•	•	•	٠	•	•	•
CLEAN ROOM™ FL for Prelude® XL Max® Square Lay-in	1815	23-13/16 × 23-13/16 × 3/4"	0.55	35	N/A	N/A	Class A	0.79	•	•	•	٠	•	-	•
Square Lay-III	1816	23-13/16 × 47-13/16 × 3/4"	0.55	35	N/A	N/A	Class A	0.79	•	•	•	٠	•	-	•
FINE FISSURED – Black for Prelude® XL Max® Square Lay-in	1747ABL	23-13/16 × 23-13/16 × 5/8"	0.55	35	N/A	N/A	Class A	N/A	•	•	•	*	•	•	•
Square Lay-III	1748ABL	23-13/16 × 47-13/16 × 5/8"	0.55	35	N/A	N/A	Class A	N/A	•	Std		٠	•		1-Yr
FINE FISSURED™ for Prelude® XL Max® Square Lay-in	1778	23-13/16 × 23-13/16 × 5/8"	0.55	35	N/A	N/A	Class A	0.82	٠	•		٠	•		•
	1779	23-13/16 × 47-13/16 × 5/8"	0.55	35	N/A	N/A	Class A	0.82	•	Std		٠	٠	•	1-Yr

NOTE: These panels are specially sized and engineered for Prelude® XL Max® and must be used with the system. These panels do not fit in other suspension systems. 
¹Total Acoustics® ceiling panels have an ideal combination of noise reduction and sound blocking performance 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+)



▲ DynaMax® Structural Grid

# Notes

# Notes

### TAKE THE NEXT STEP

#### 877 276-7876

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**Tech**Line – 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.

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