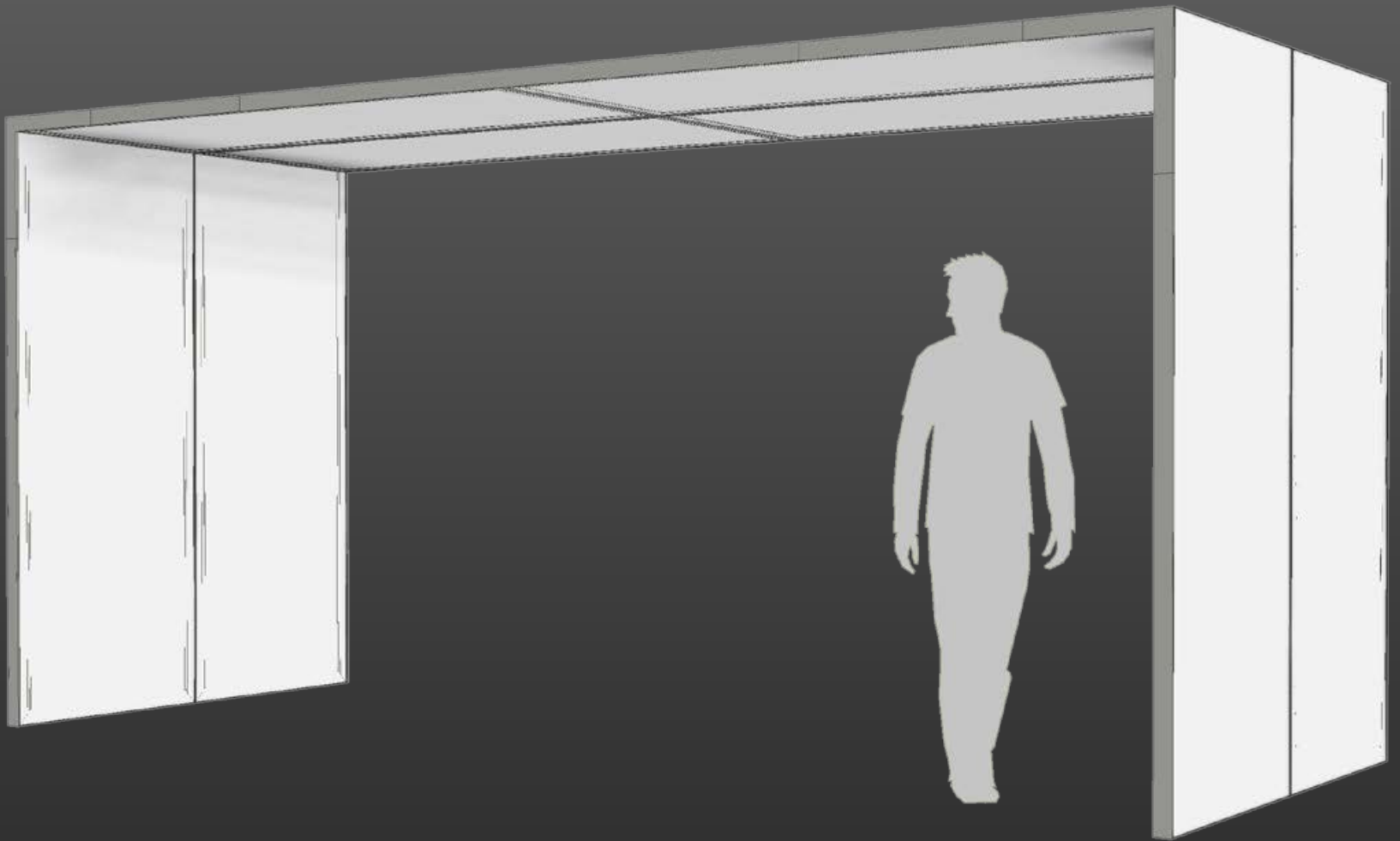


Ceiling

How to create a
beMatrix ceiling



beMatrix[®]
THE RENTAL SOLUTION

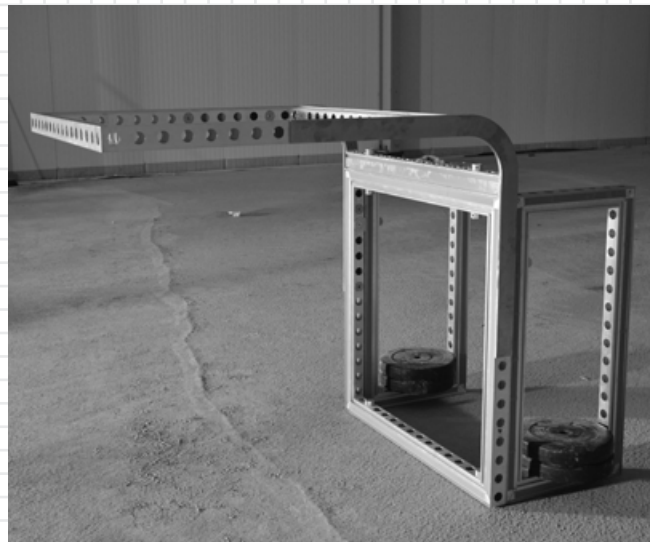
Intro

Purpose of this leaflet

This document contains information on how to create multiple spans using the beMatrix® System.

beMatrix® conducted various strength tests that consisted of placing 22 lbs. (10 kg) per frame. If a span bent more than 0.79" (30 mm) the test failed.

Note: You are responsible for the stability of your structures. If you have any doubts contact our technical department.



INDEX

**Summary of the
sections that will
be covered**

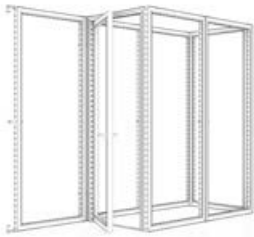
Chapter 1	Construction conditions
Chapter 2	Connecting horizontal frames to vertical frames
Chapter 3	Canopies
Chapter 4	Structure spans
Chapter 5	Corner ceilings
Chapter 6	References
Chapter 7	Elaborated cases

Chapter 1

Construction conditions

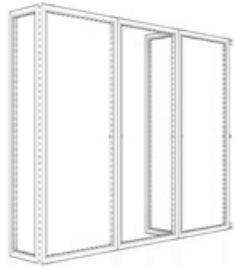
When building a structure that includes a ceiling, making sure the walls are straight and sturdy is very important.

Below, a number of ways to guarantee stability are illustrated.



Vertical walls incorporated in a larger structure

The most stable method is for the vertical wall to be an integral part of a larger structure with a considerable unladen weight.



Vertical walls supported by return frames

Placing a frame perpendicular on a wall enables you to reinforce that wall.

Note: Return frames should be 19.53" (496 mm) to 39.06" (992 mm) wide for guaranteed stability.



Vertical walls supported by baseplates

A baseplate can also make a frame more stable.

However, this option is not as sturdy as option 1 or 2.

Chapter 1

Construction conditions

Spans can be strengthened by using aluminium cover profiles.

To achieve this additional stability successfully, you need to follow the rules set out below.



1. The hole covers must overlap the frames. The joints/seams must not be located in the same place.



2. Place the standard cover profile Fixation Connector [901 00 033] at the end of each cover profile. Tighten the hole covers to the frames with the Tooless™ M8 bolt connector [901 2048 0066 ECO].

Chapter 1

Construction conditions

Span structures can be strengthened by using aluminium cover profiles. To achieve this additional stability successfully, you need to follow the rules set out below.



3. Place the standard cover profile fixation connectors within the first few holes on both sides of the frame joint for maximum support.

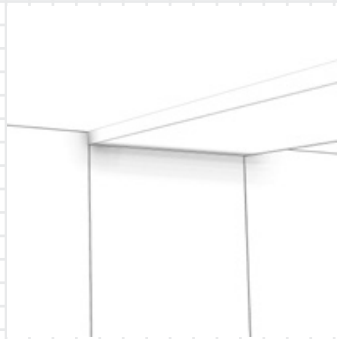


4. The maximum distance between connectors should not exceed 39.06" (992 mm).

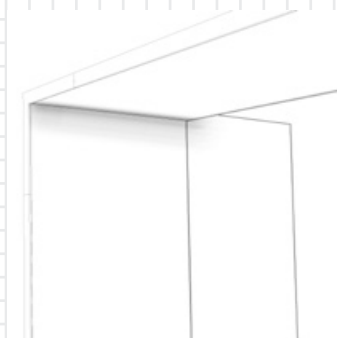
Chapter 2

Connecting horizontal frames to vertical frames

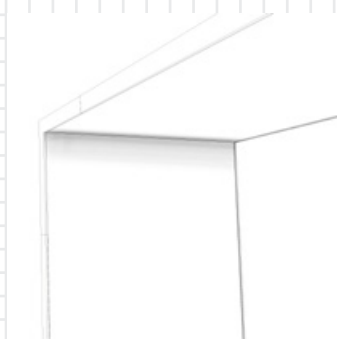
A span can be attached to a vertical frame in various ways. This is a summary of the most frequently used methods.



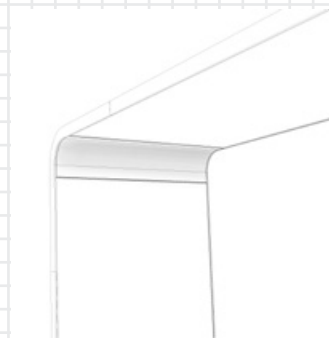
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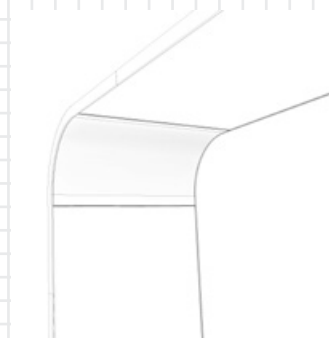
2. Ceiling Connectors + Steel Hole Covers



3. Steel Covers 90DEG

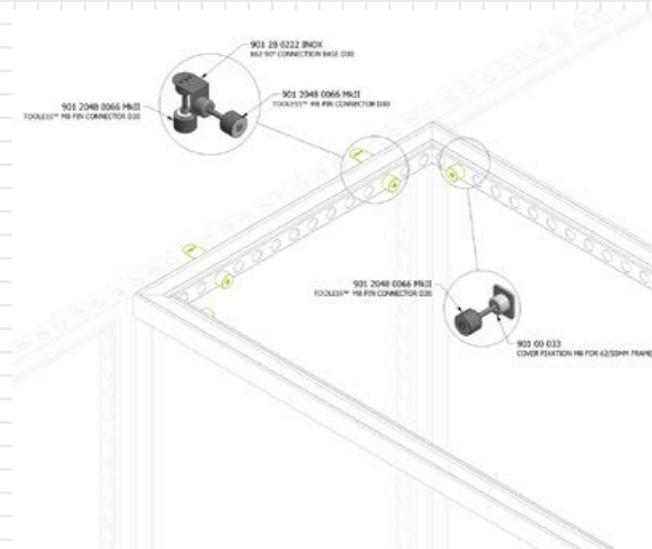
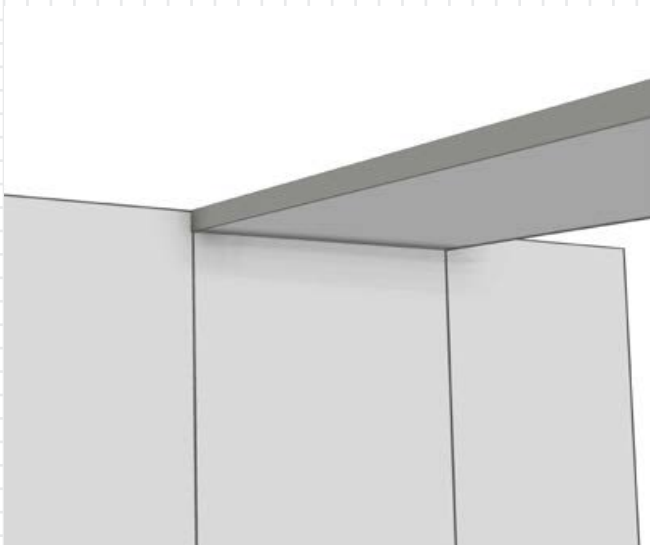


4. Steel Covers Curved 1R [R0248]

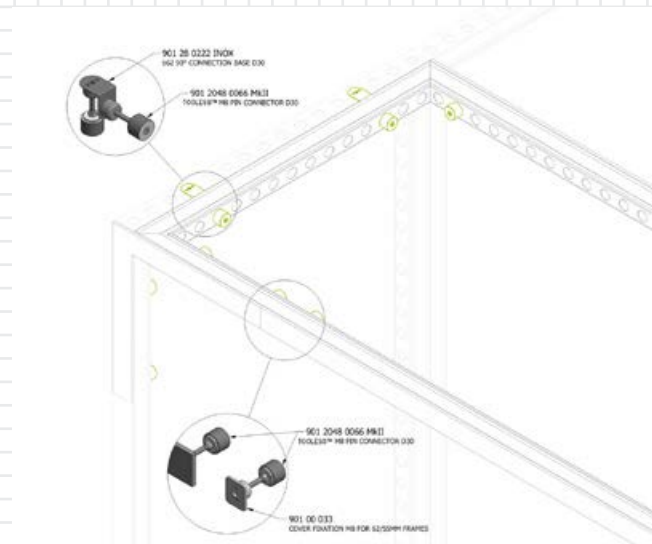
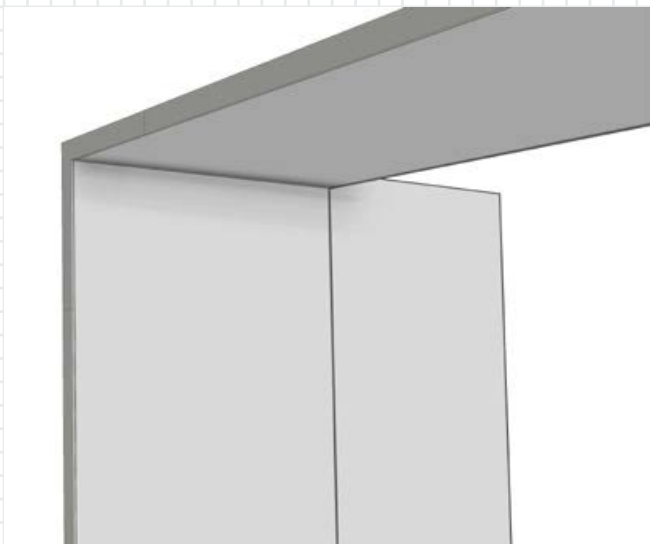


5. Steel Covers Curved 2R [R0496]

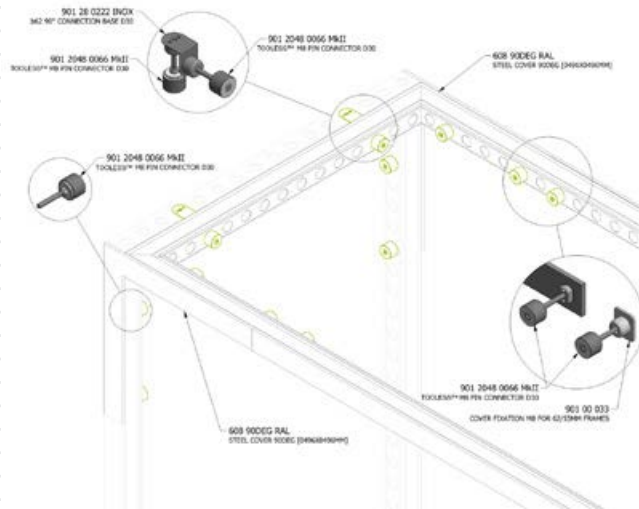
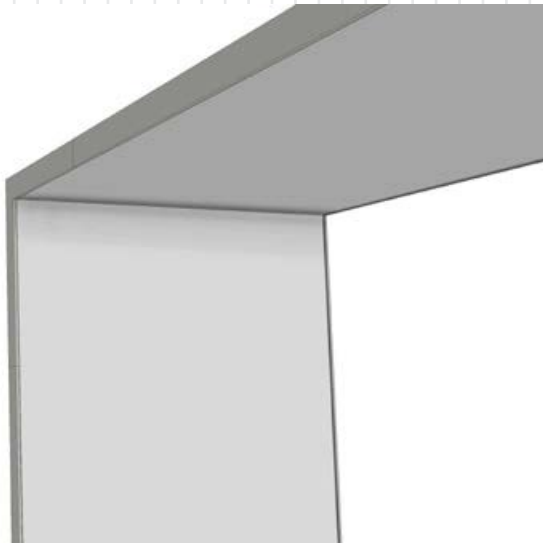
1. Ceiling Connectors



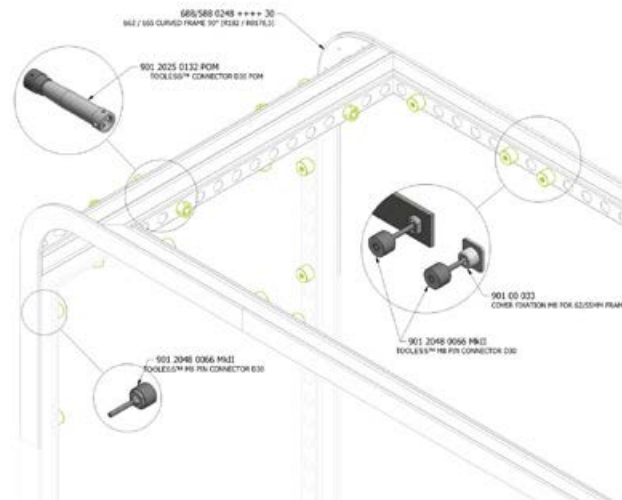
2. Ceiling Connectors + Steel Hole Cover



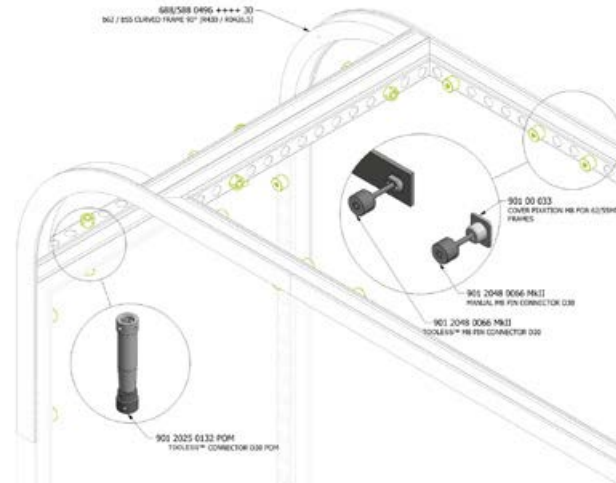
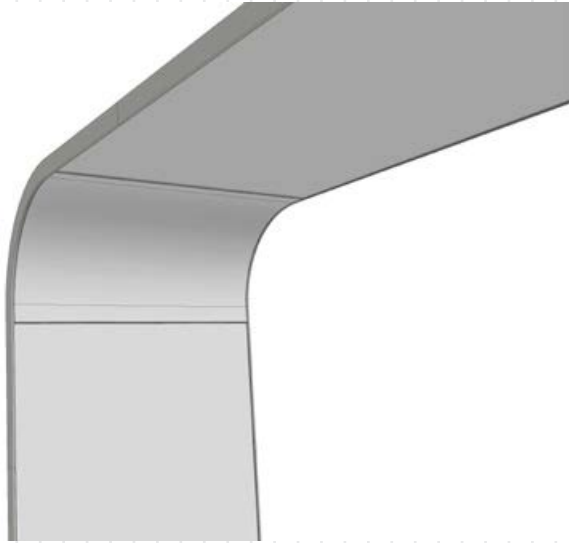
4. Steel Covers 90DEG



5. Steel Covers Curved 1R [R0248]



6. Steel Covers Curved 2R [R0496]



Chapter 3

Canopies

A canopy is defined as horizontal beMatrix® frames connected perpendicular to vertical beMatrix® frames. Below we summarize the four most common canopy options.

With this type of ceiling, the sturdiness of the wall is crucial. For this reason, we advise against using baseplates.



1. Straight



3. 2R Curves [R0496]



2. 1R Curves [R0248]



4. With suspension

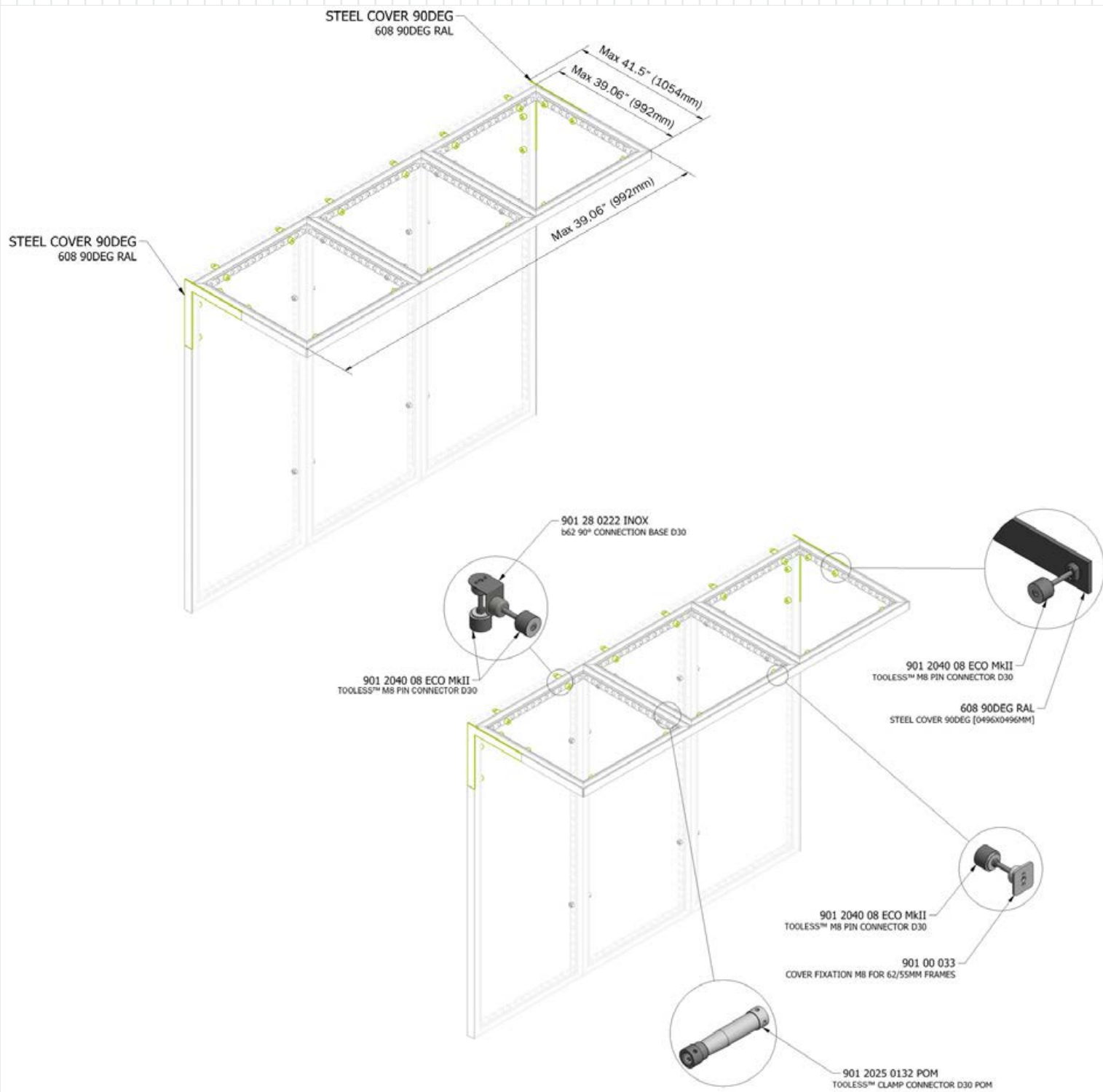


5. Canopy References

Chapter 3

1. Straight Canopy

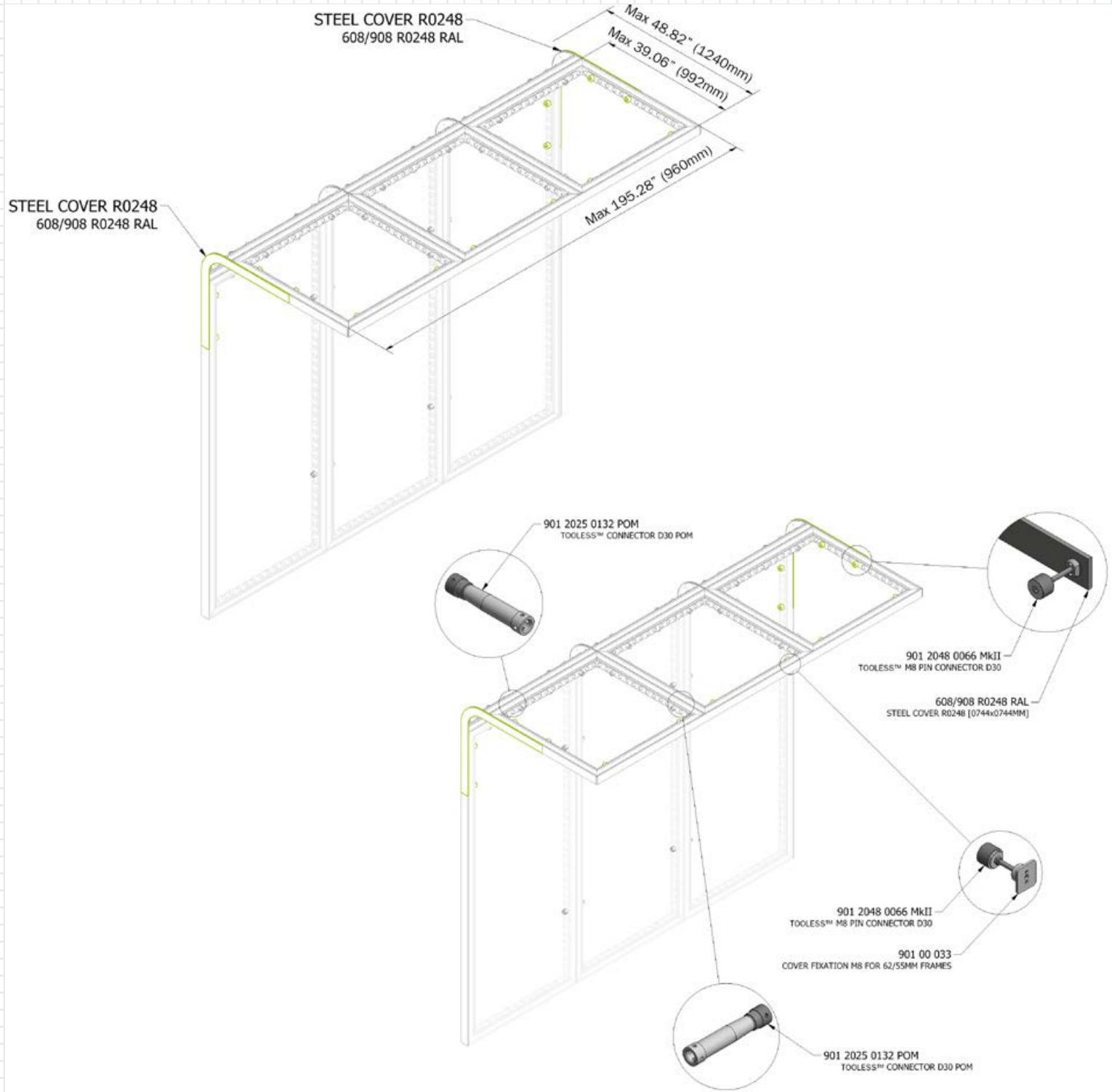




Chapter 3

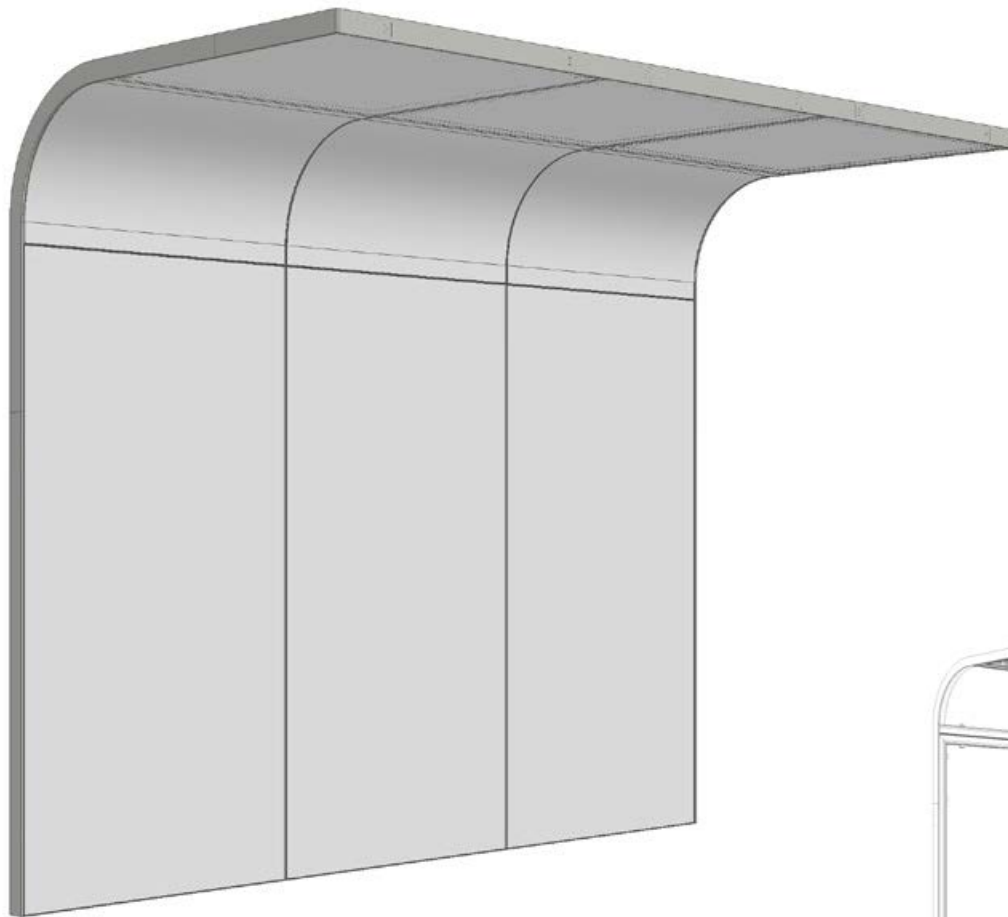
2. Canopy 1R Curve [R0248]

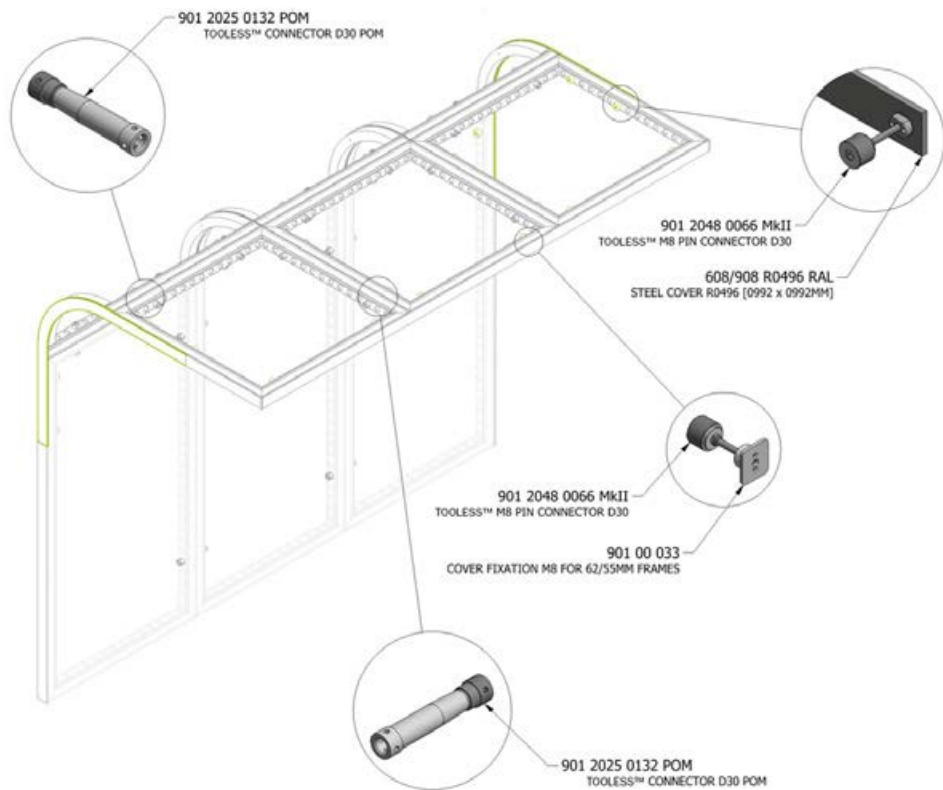
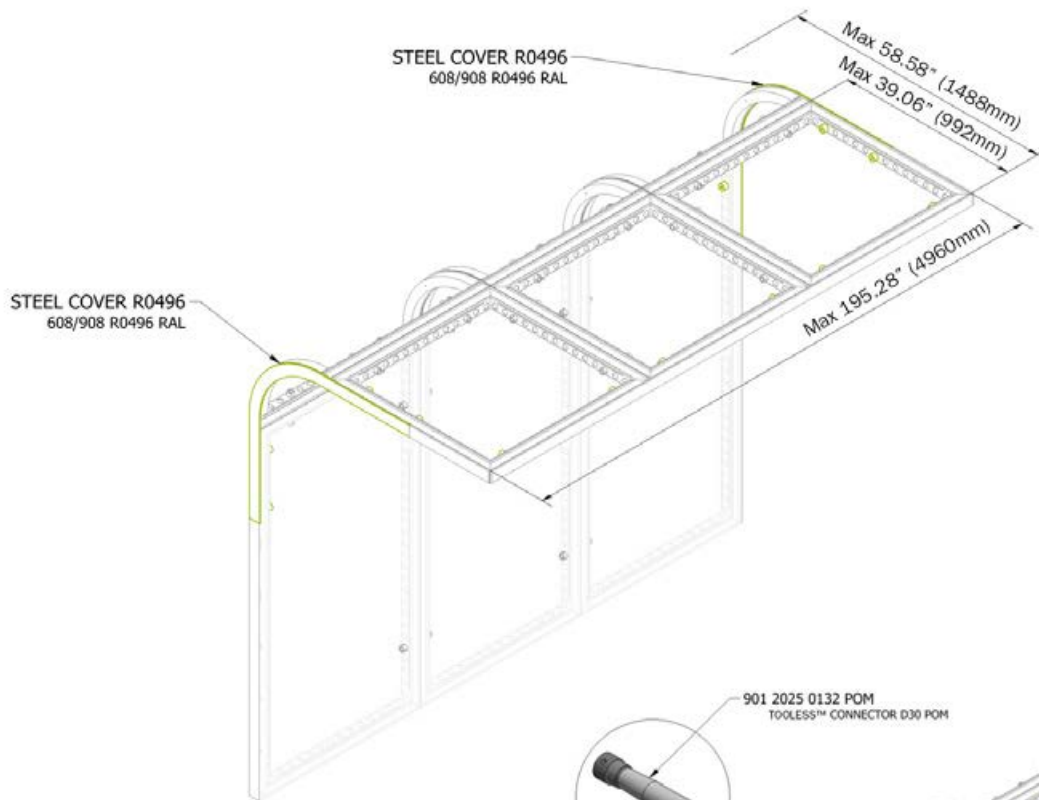




Chapter 3

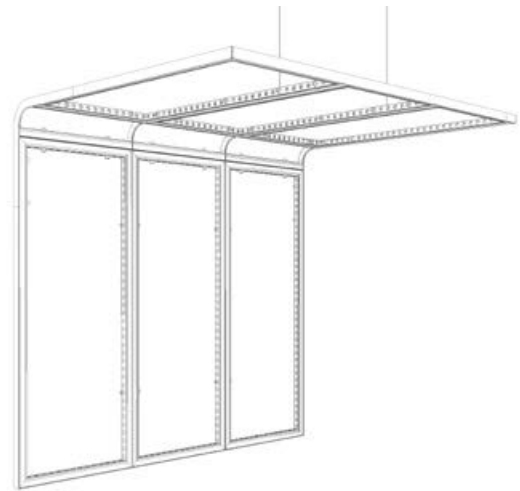
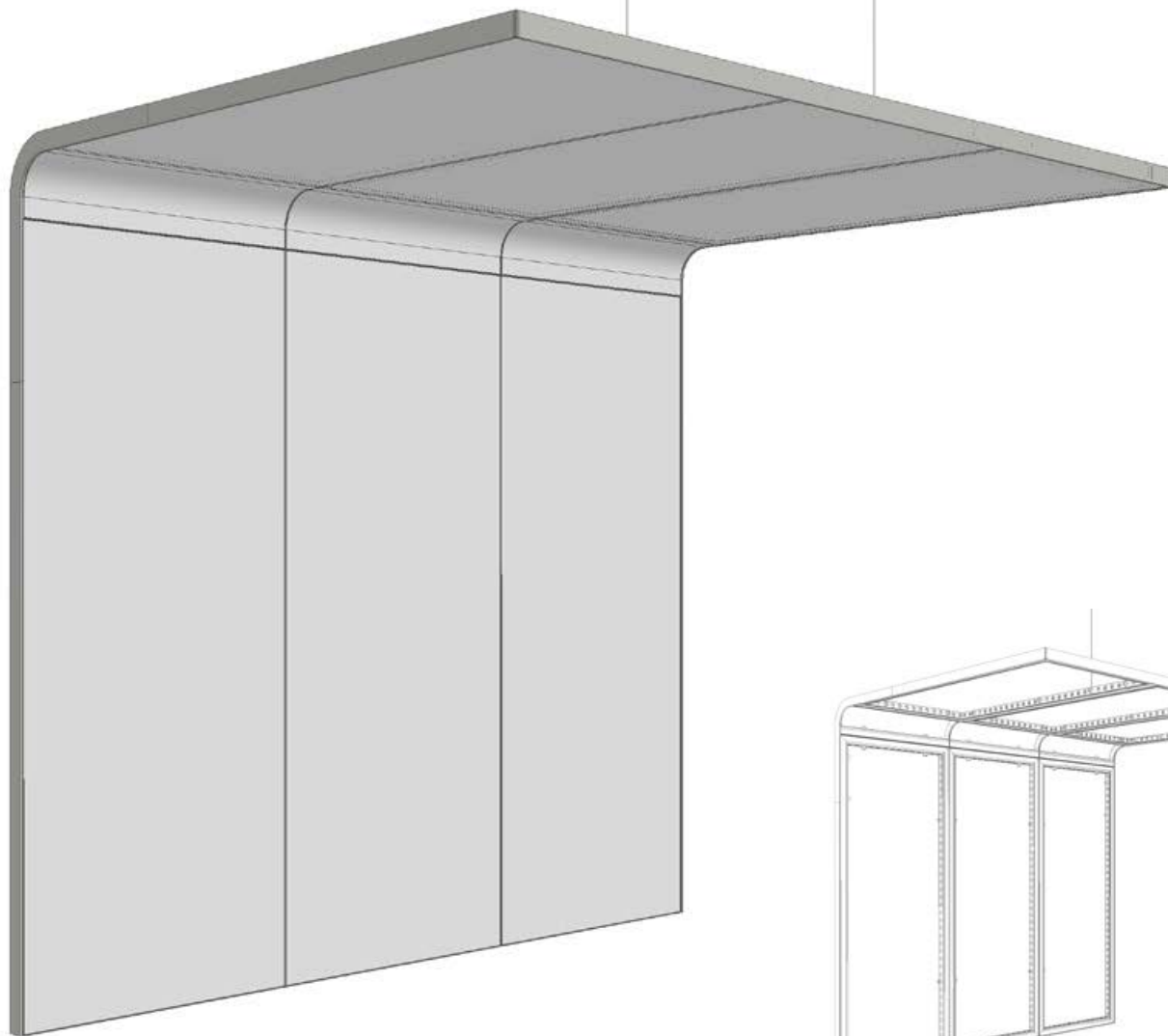
3. Canopy 2R Curve [R0496]

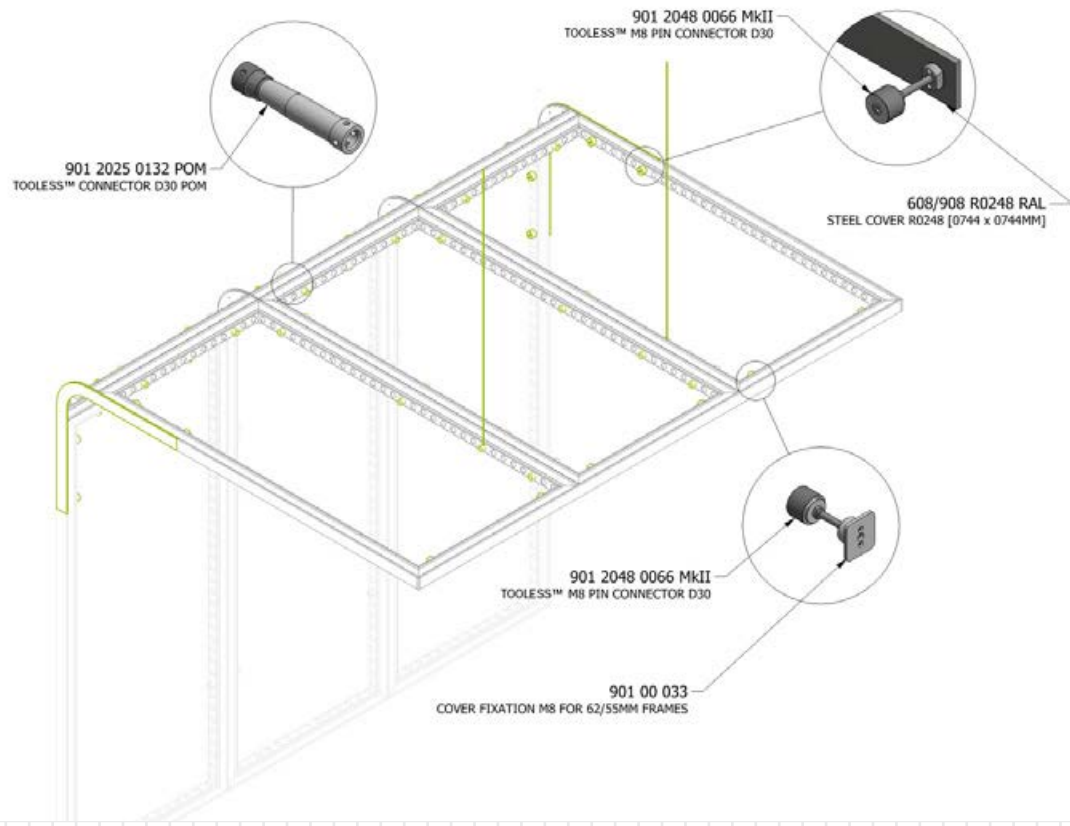
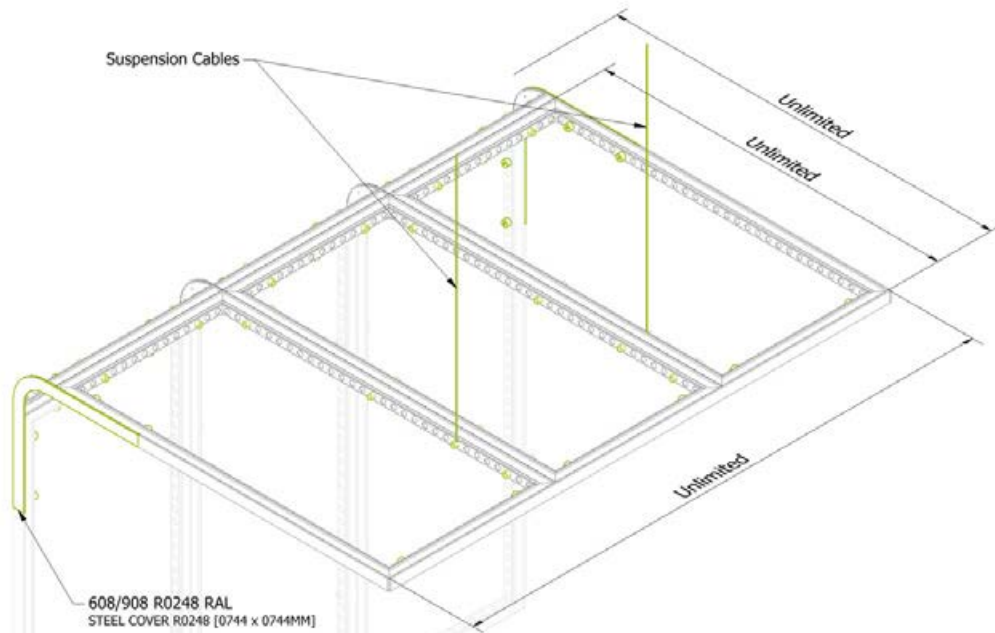




Chapter 3

4. Canopy with suspension





Chapter 3

5. Canopy References



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© ?



© Imagine Events (UK)



© Desytech (FR)

Chapter 4

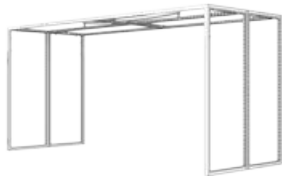
Span structures

A structure span is the maximum distance beMatrix® frames can plane horizontally between two vertical end frames. Most common options are summarized below.

With this type of ceiling, the stability of the wall is crucial. For this reason, we recommend supporting only one or two walls with baseplates.



1. 1m x 3.5m (3.28' x 11.48') Maximum Structure Span



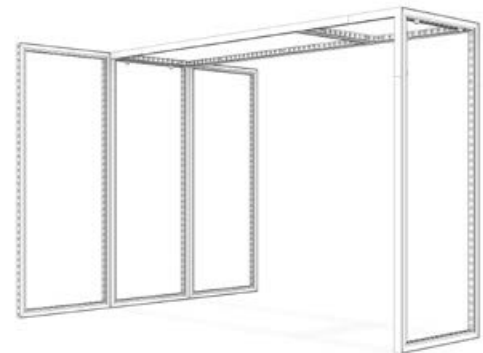
2. 5m (16.4') Maximum Structure Span

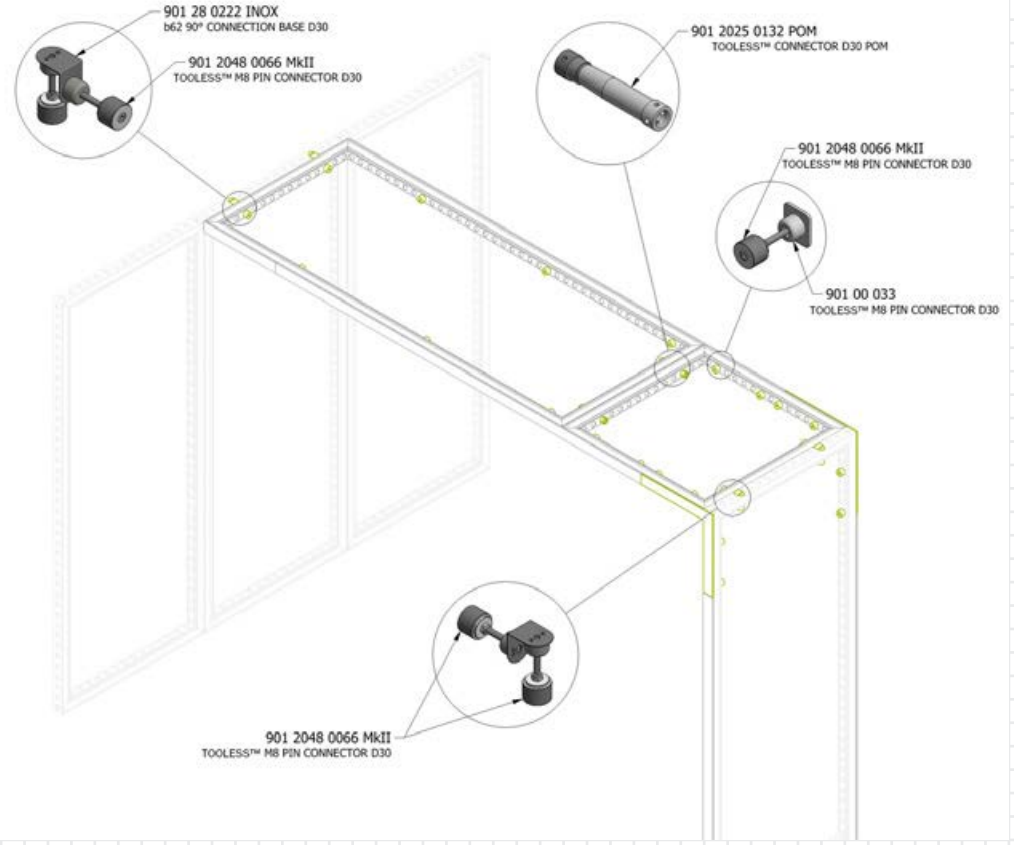
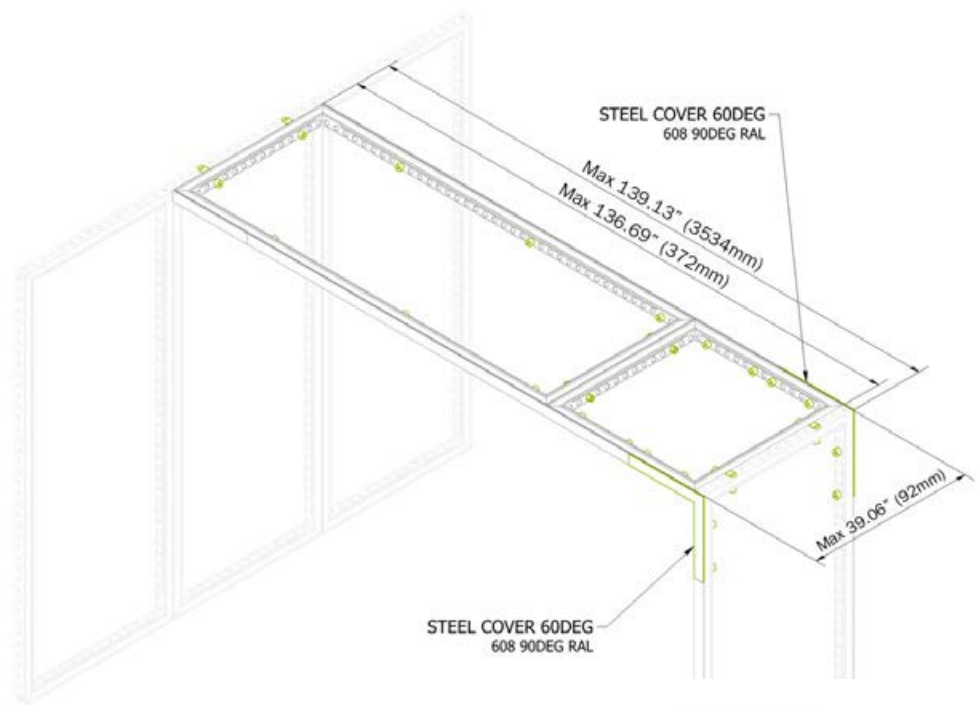


3. 7.5m (24.61') Maximum Structure Span

Chapter 4

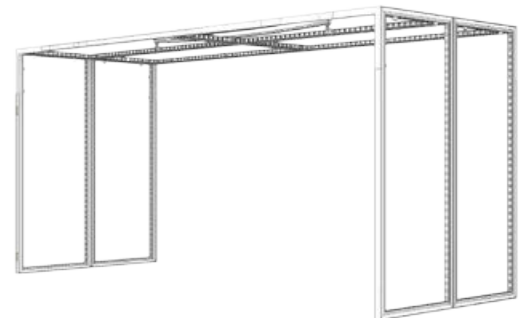
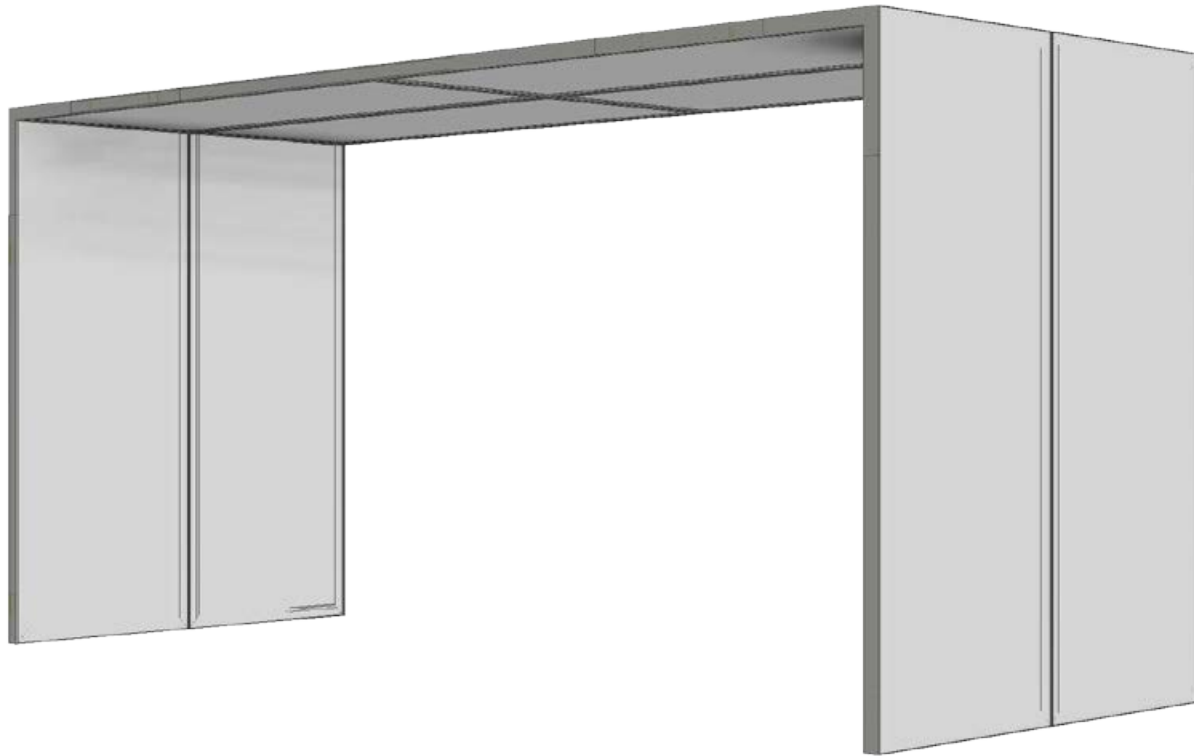
1. 1m x 3.5m
(39.06" x 137.8")
Maximum
Structure Span

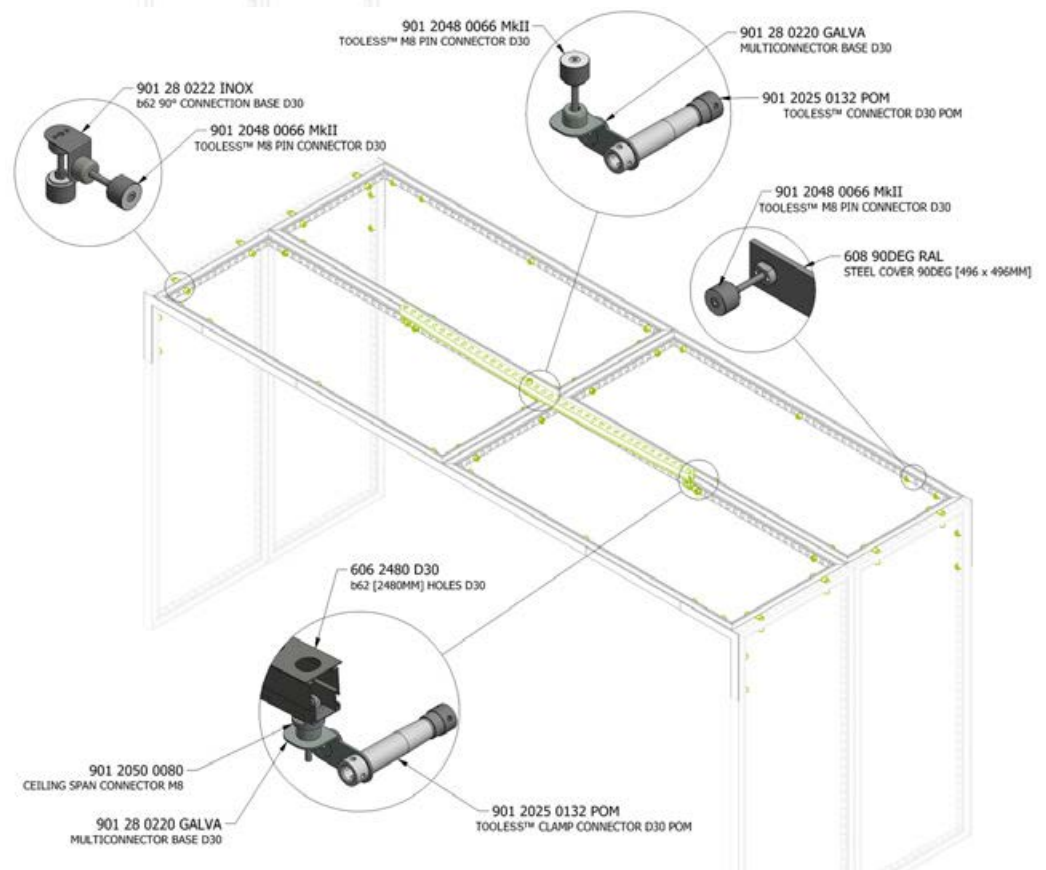
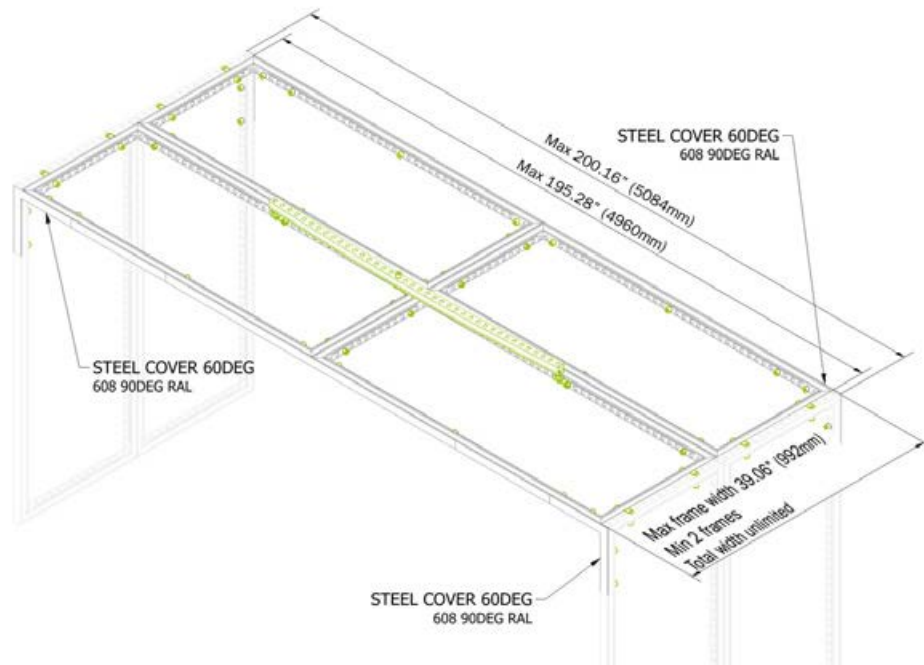




Chapter 4

**2. 5m (196.85")
Maximum
Structure Span**

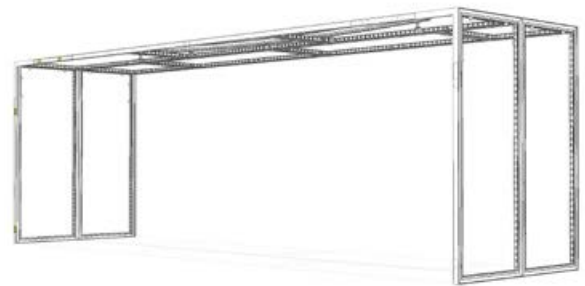


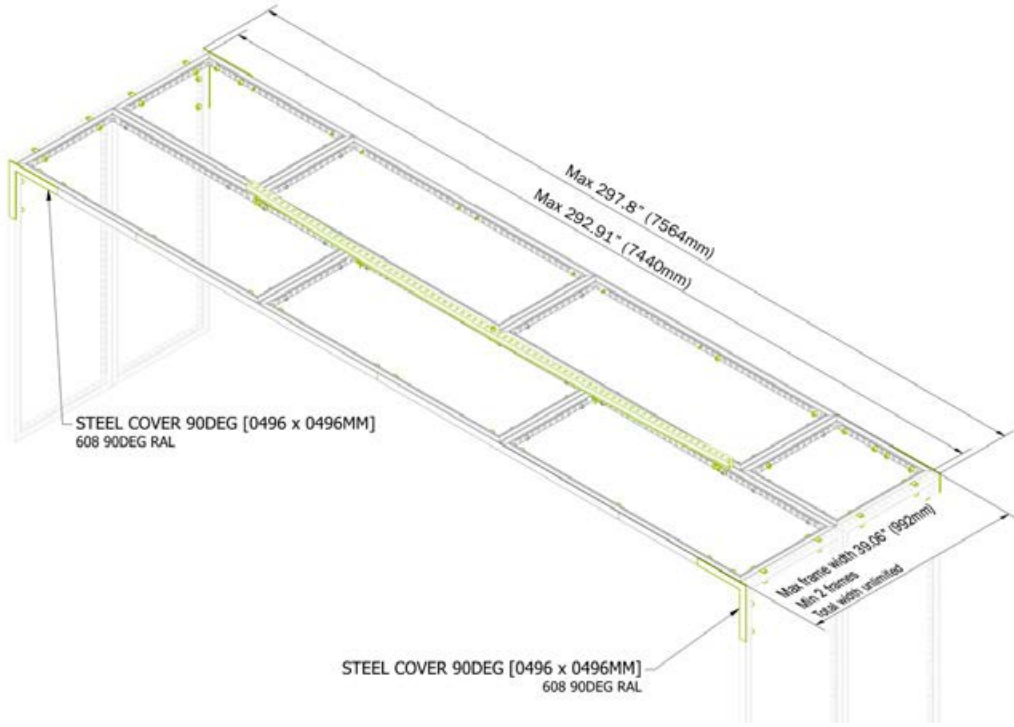


Chapter 4

3. 7.5m (295.28") Maximum Structure Span

Please reference the next section, 'How to support large spans' for more information.





901 28 0222 INOX
 b62 90° CONNECTION BASE D30

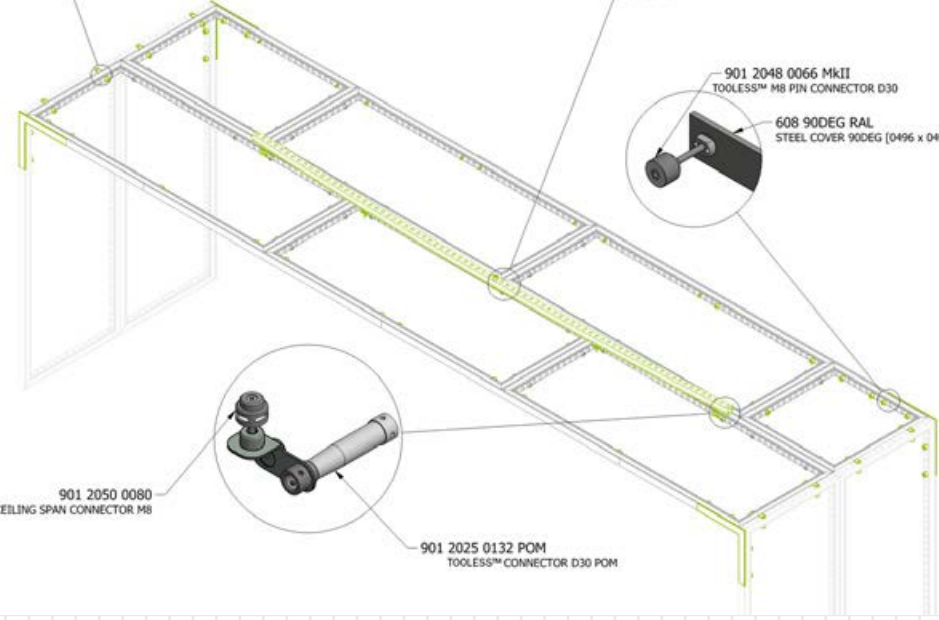
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 TOOLESSTM M8 PIN CONNECTOR D30



901 2048 0066 MkII
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 MULTICONNECTOR BASE D30

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 TOOLESSTM CONNECTOR D30 POM

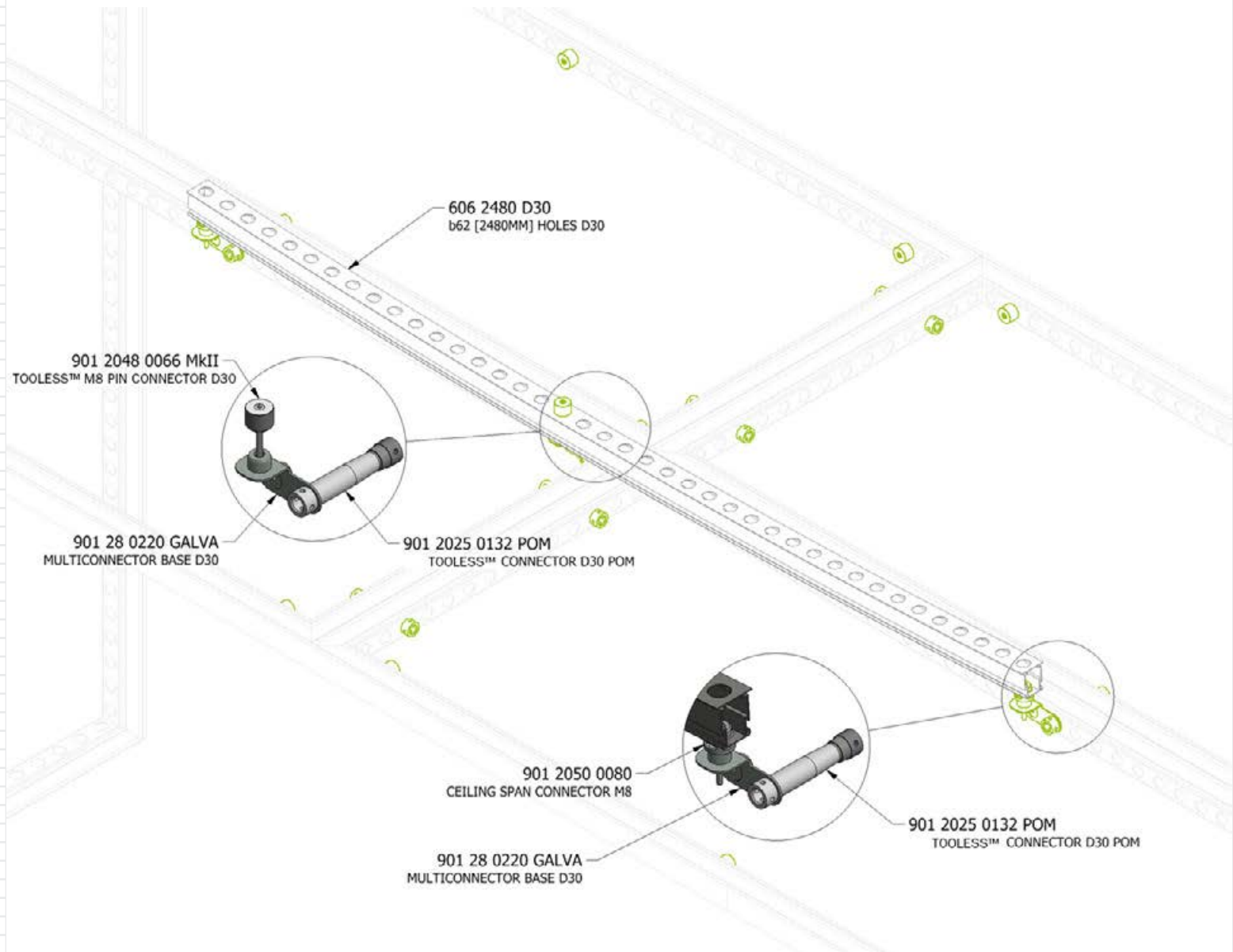


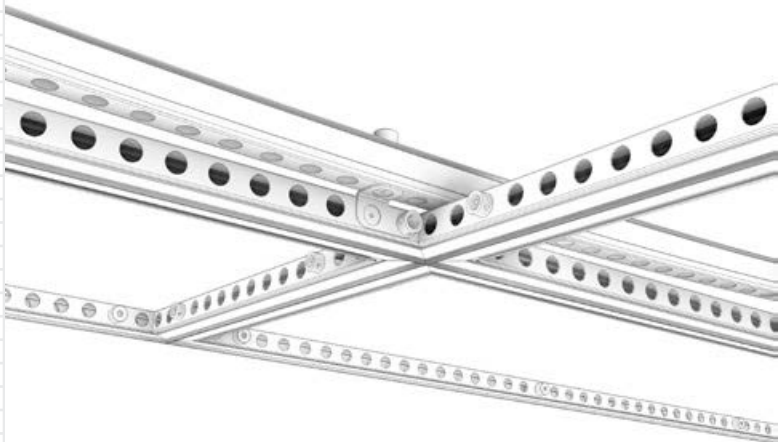
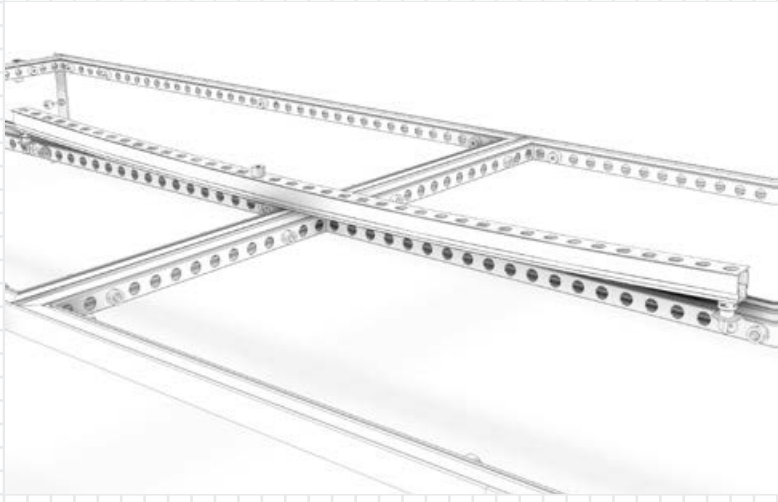
Chapter 4

Ceiling Support Profile Assembly

To reach larger spans and ceilings with the beMatrix system, a Ceiling Support Profile Assembly is required. By placing a load on this profile and bending it, you obtain a totally horizontal ceiling.

The result is that the supporting profile bends and not the ceiling.





NOTE:

- M6 Hex Key Needed
- Adjusts 1.97" (50mm)

Chapter 4

References of structure spans



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© Integra design (CO)



© Laarhoven Design (NL)



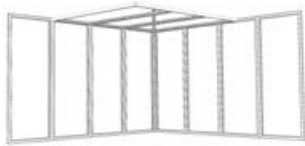
© Ontwerpbureau Jan (BE)

Chapter 5

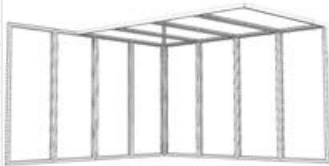
Corner Ceilings

With a ceiling in a corner, several frames are placed between 2 beMatrix adjoining walls. We have summarised the most common options below.

This type of ceiling is only possible by using a span on beMatrix walls.



1. Corner Ceilings

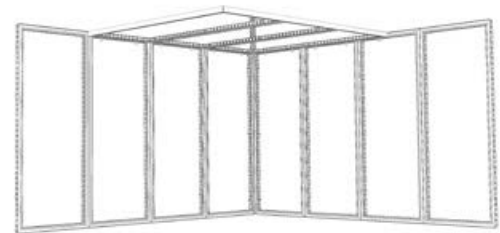
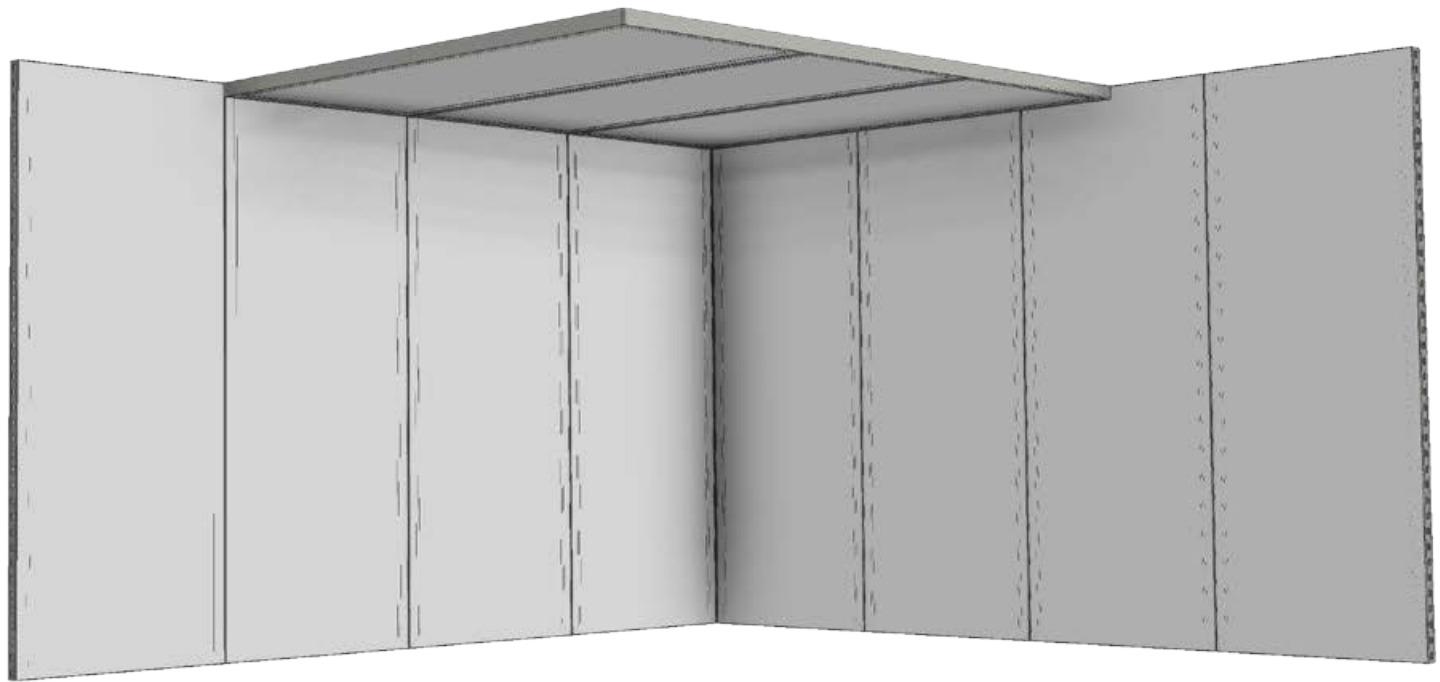


2. Corner Ceilings with Steel Covers

Chapter 5

1. Corner Ceilings

To create a stable ceiling without sagging, attach the ceiling frames via a suspension cable to a corner post built within the structure.



SQUARE 62: 496mm longer than wall-height

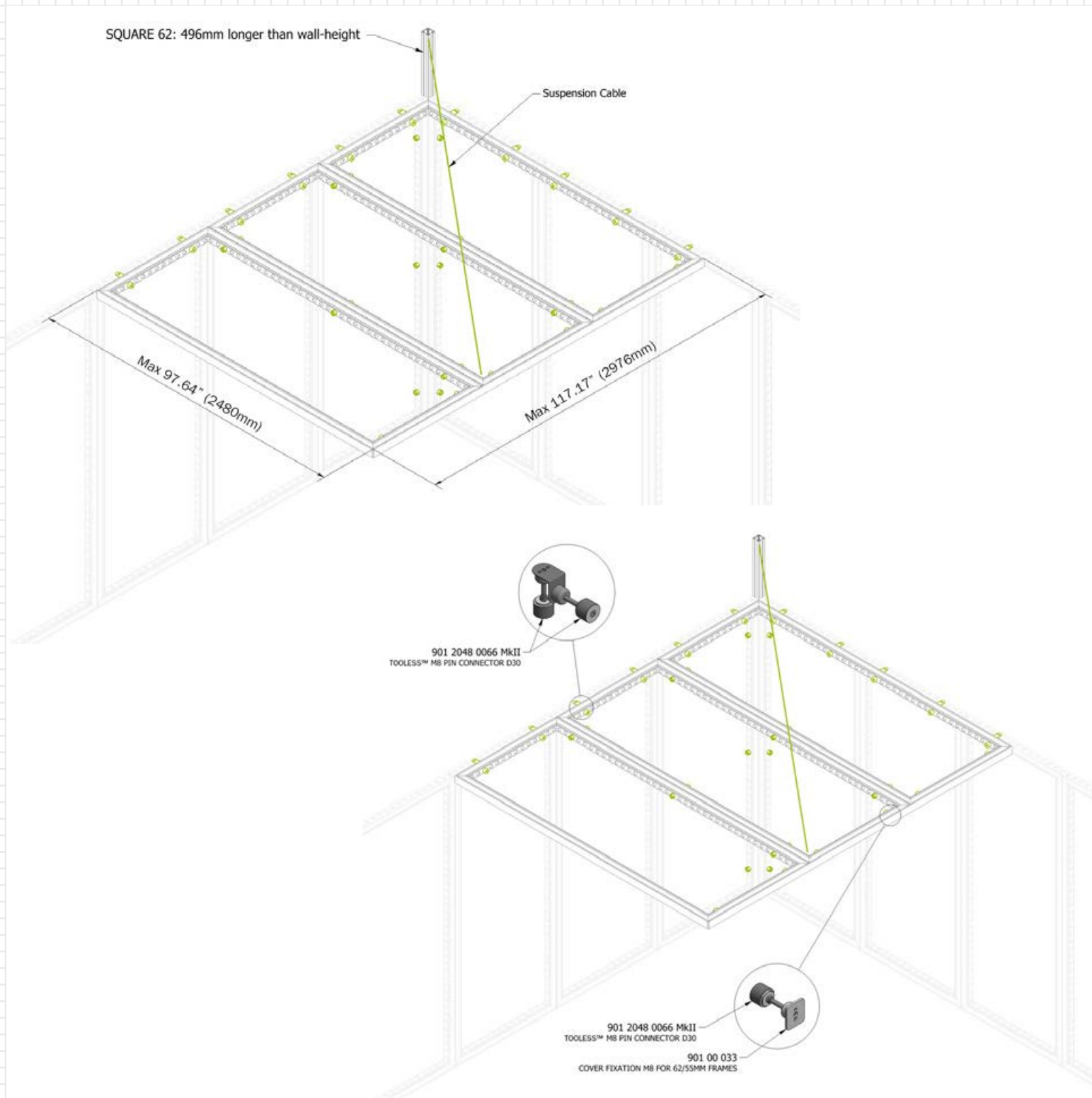
Suspension Cable

Max 97.64" (2480mm)

Max 117.17" (2976mm)

901 2048 0066 MkII
TOOLESS™ M8 PIN CONNECTOR D30

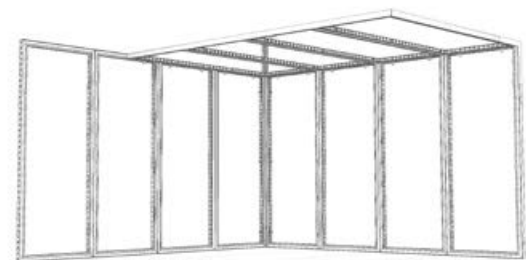
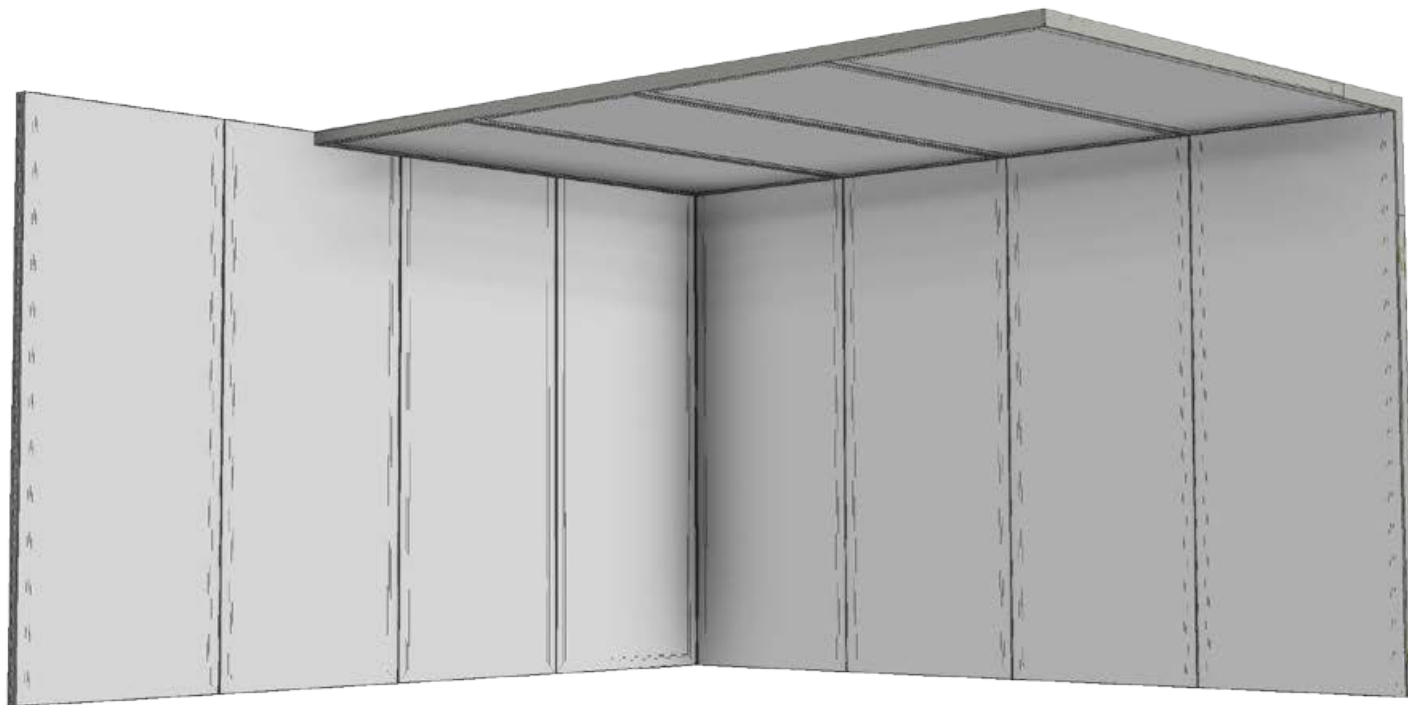
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TOOLESS™ M8 PIN CONNECTOR D30
901 00 033
COVER FIXATION M8 FOR 62/55MM FRAMES

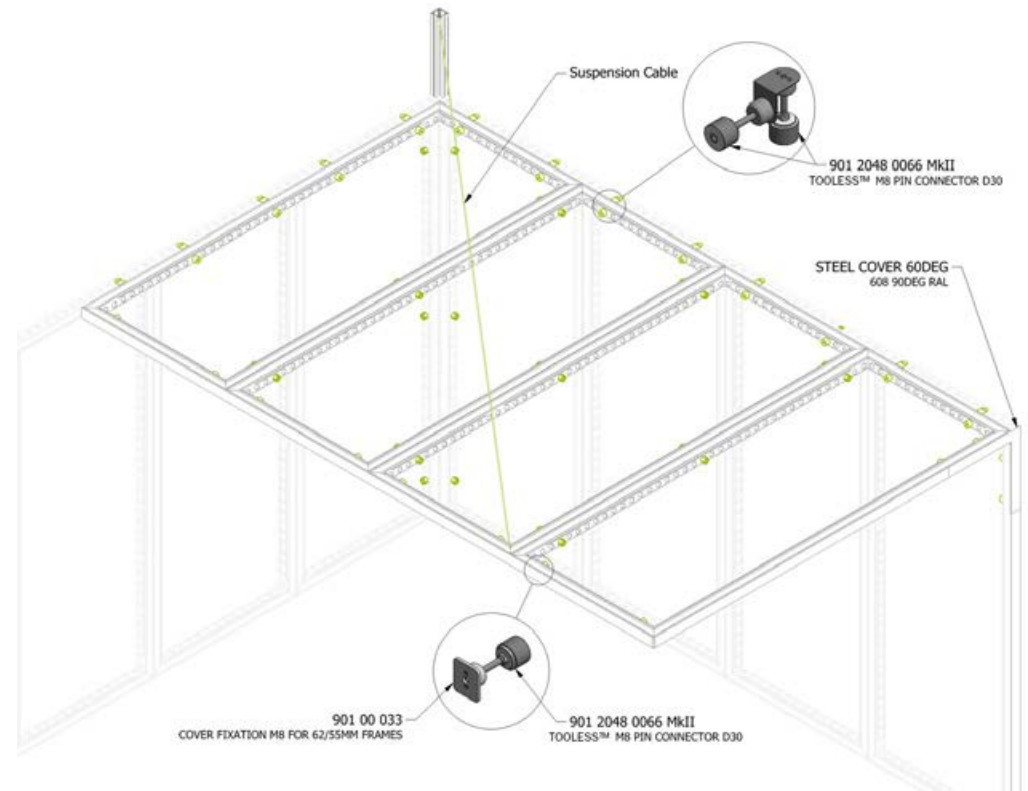
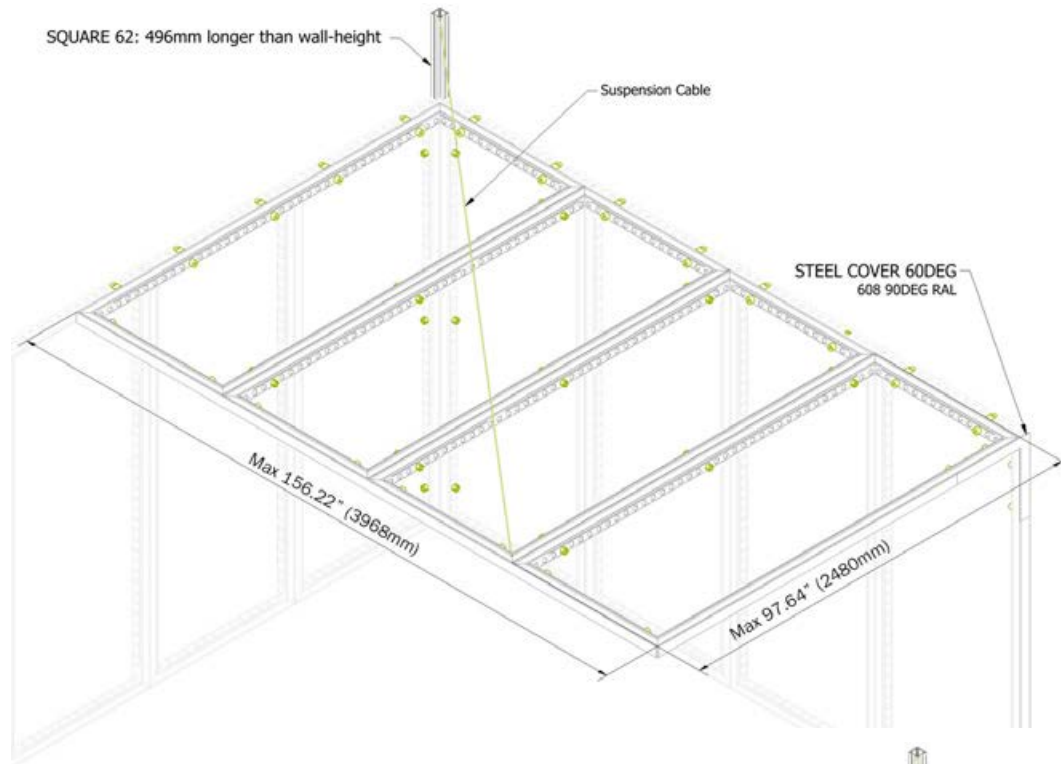


Chapter 5

2. Corner Ceilings with Steel Covers

To create a stable ceiling without sagging, attach the ceiling frames via a suspension cable to a corner post built within the structure.





Chapter 6

References



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© Inkla Plus (SI)



© beMatrix USA



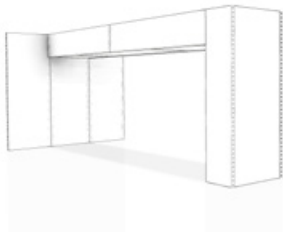
© Conceptexpo (BE)

Chapter 7

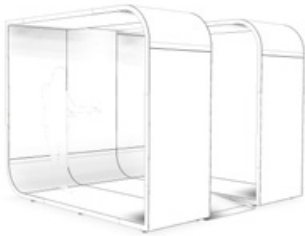
Elaborated cases

With the beMatrix system, any combination of frames is possible. Provided the rules set out are followed, any design is possible.

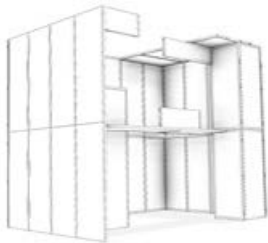
Below are 3 cases to inspire you.



Case 1



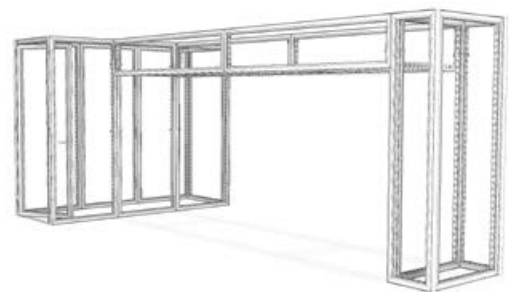
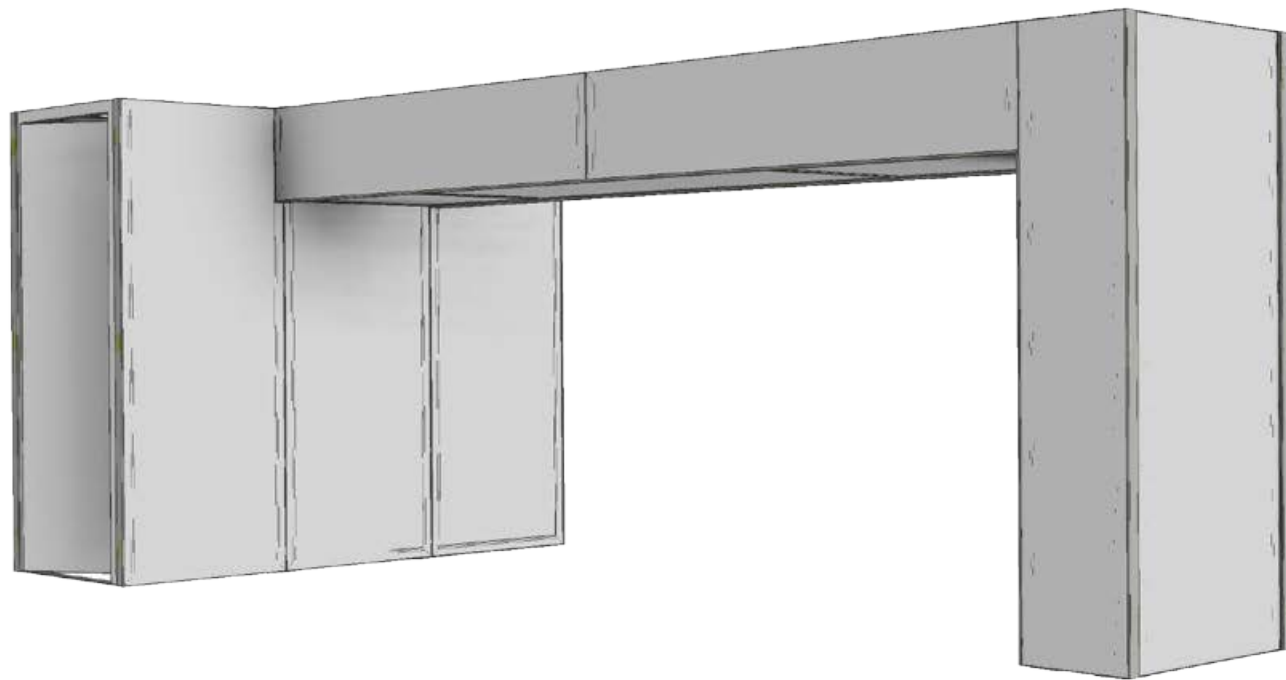
Case 2



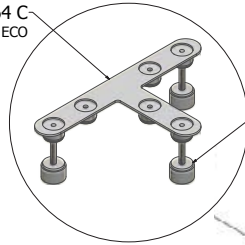
Case 3

Chapter 7

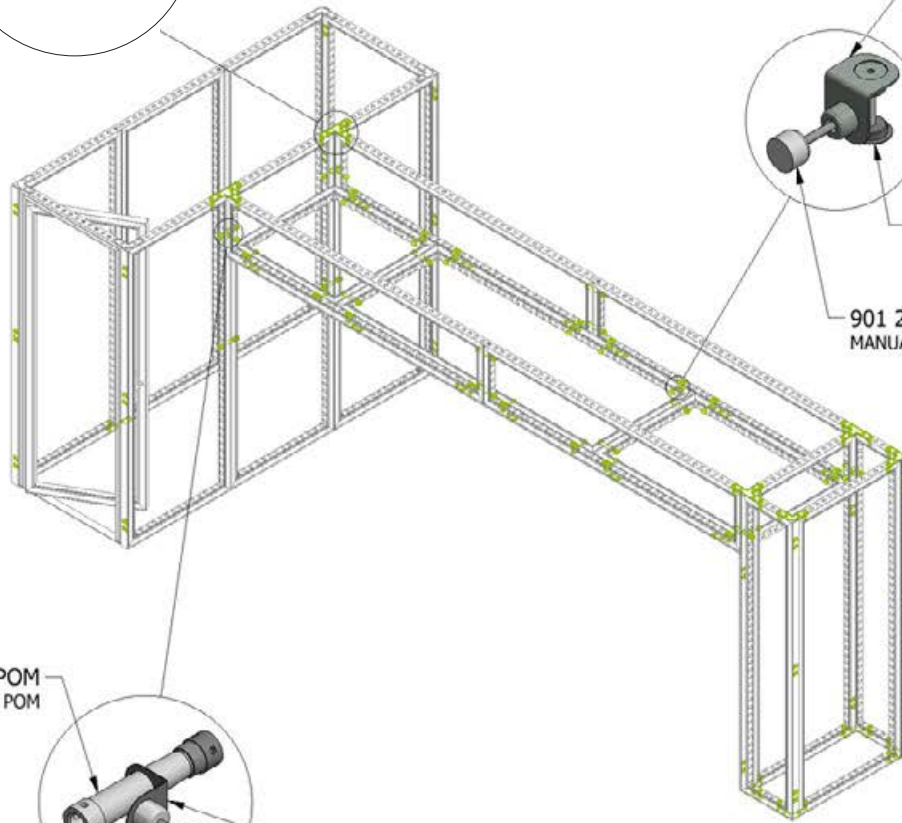
Case 1



901 28 0364 C
T 6 PIN D30 ECO



901 2048 0066 MkII
MANUAL M8 PIN CONNECTOR D30



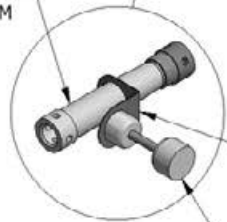
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DMK 90° CONNECTION BASE D30



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MANUAL CLAMP CONNECTOR D30 POM

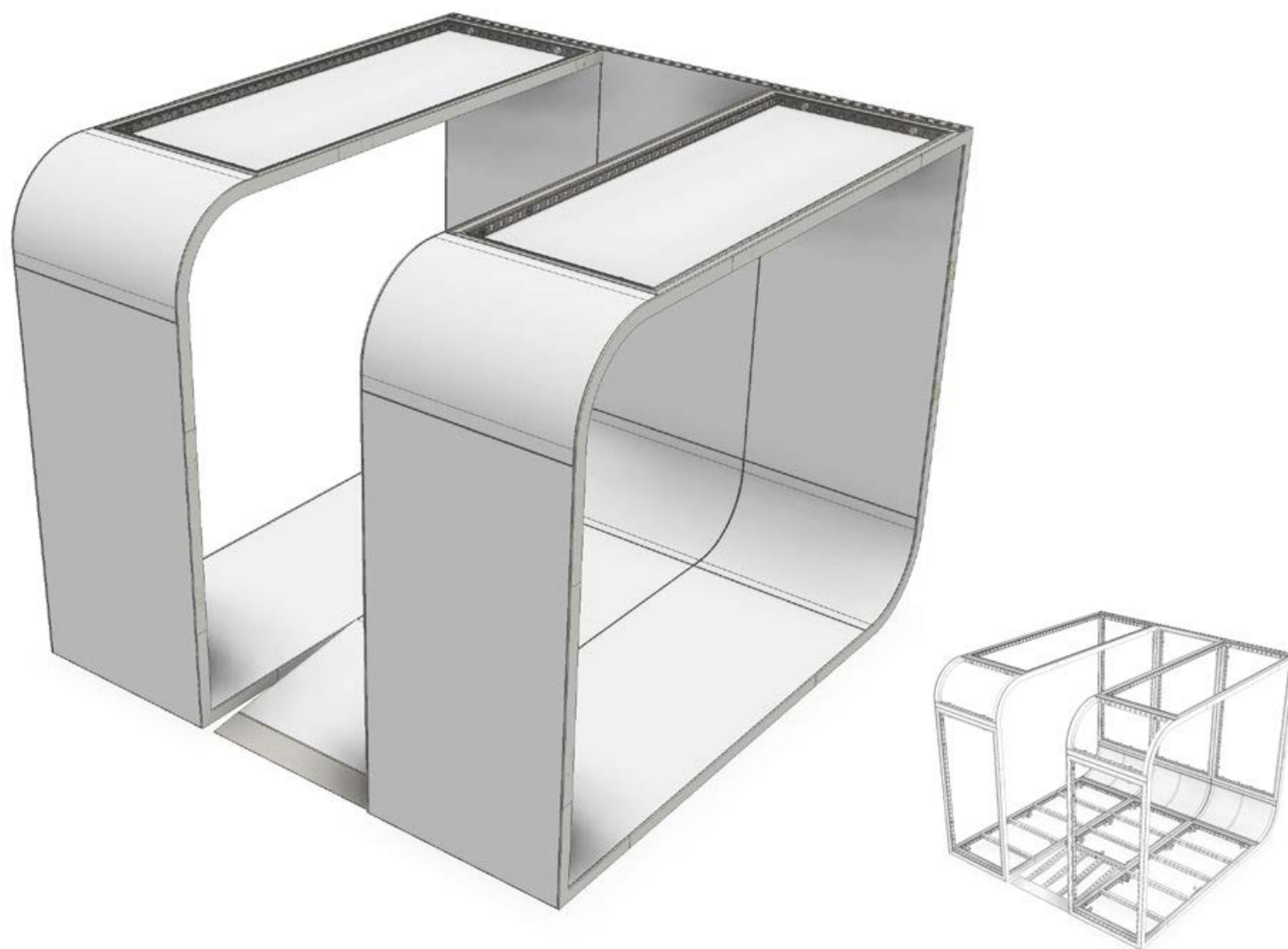


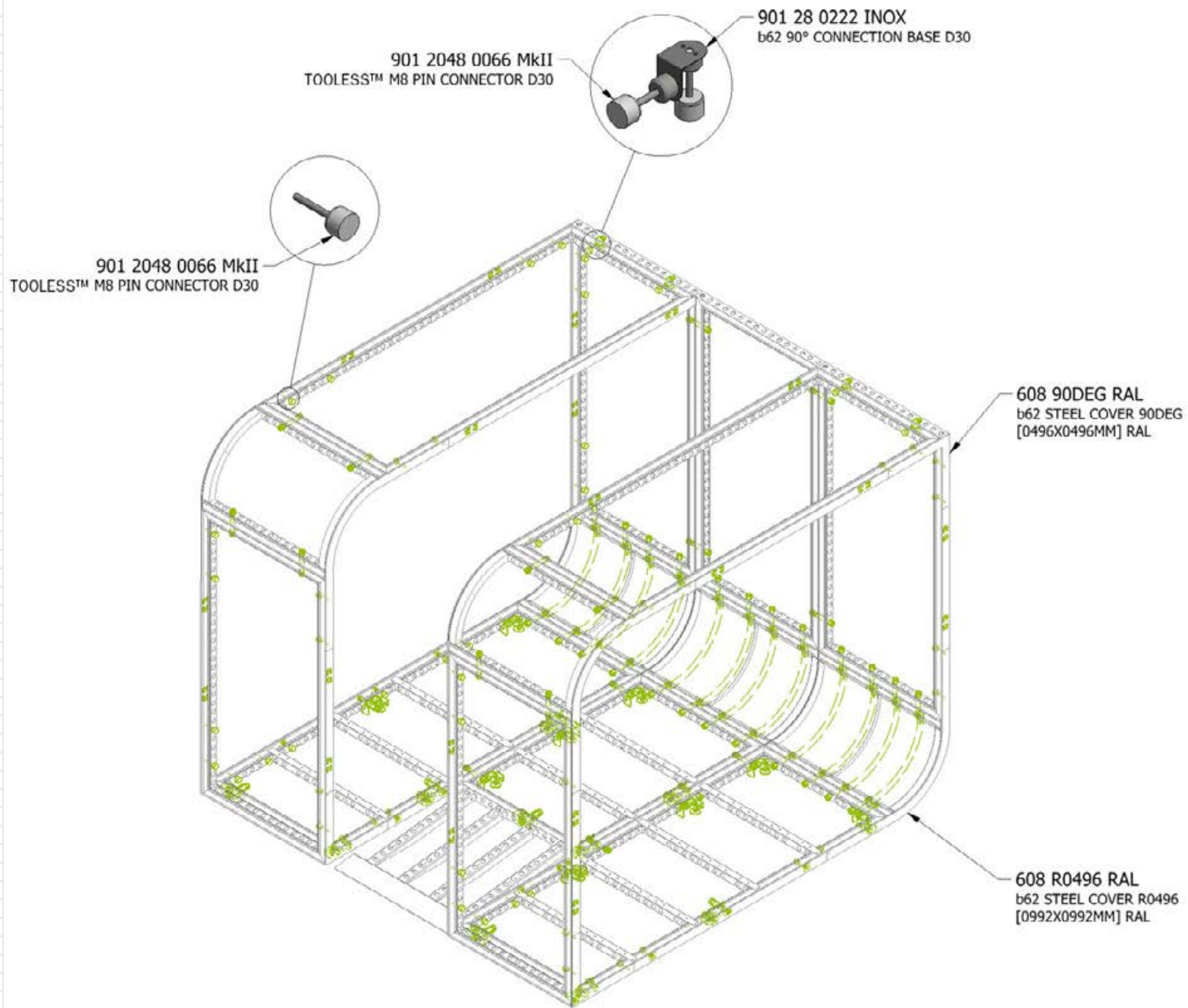
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Chapter 7

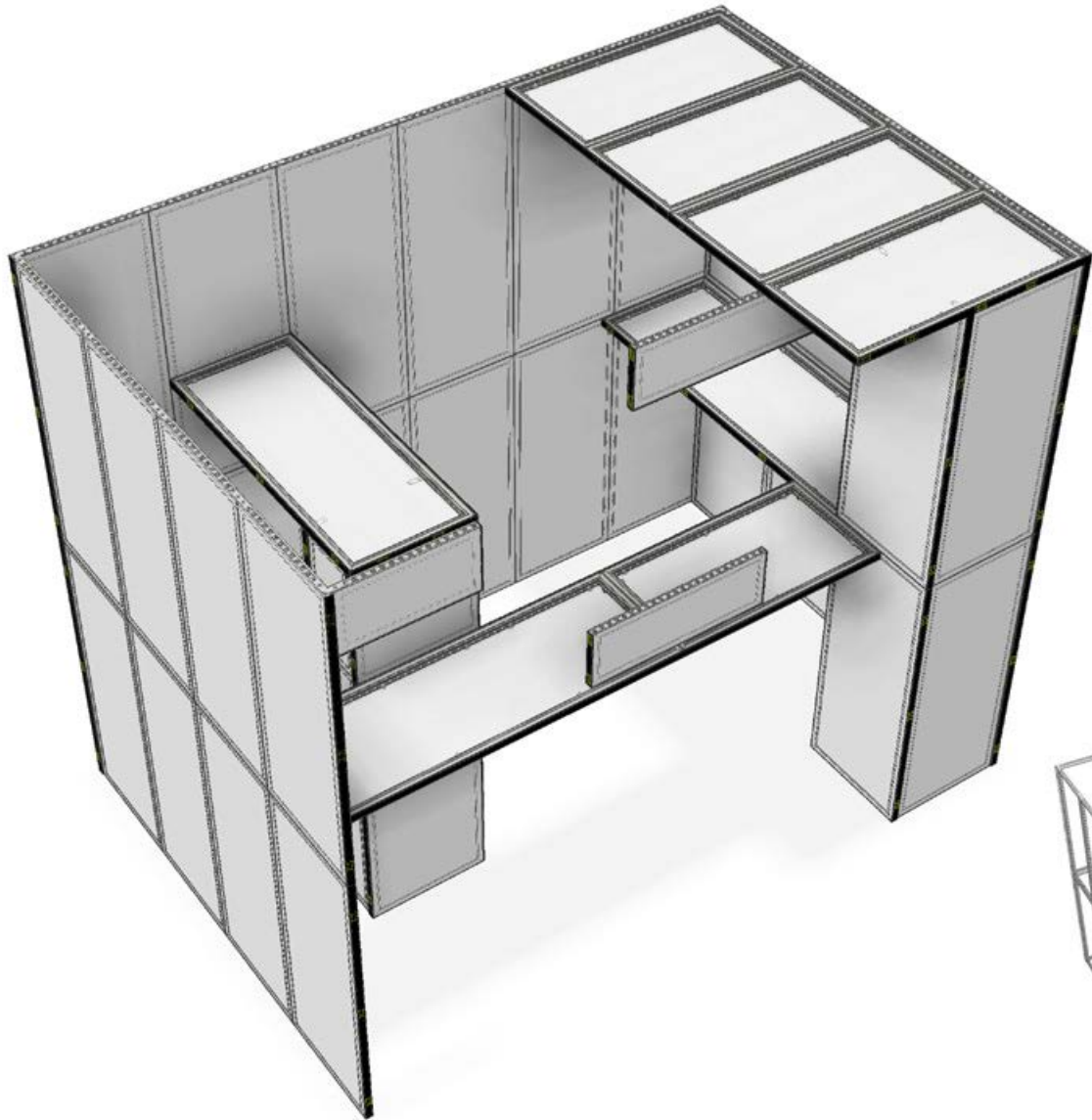
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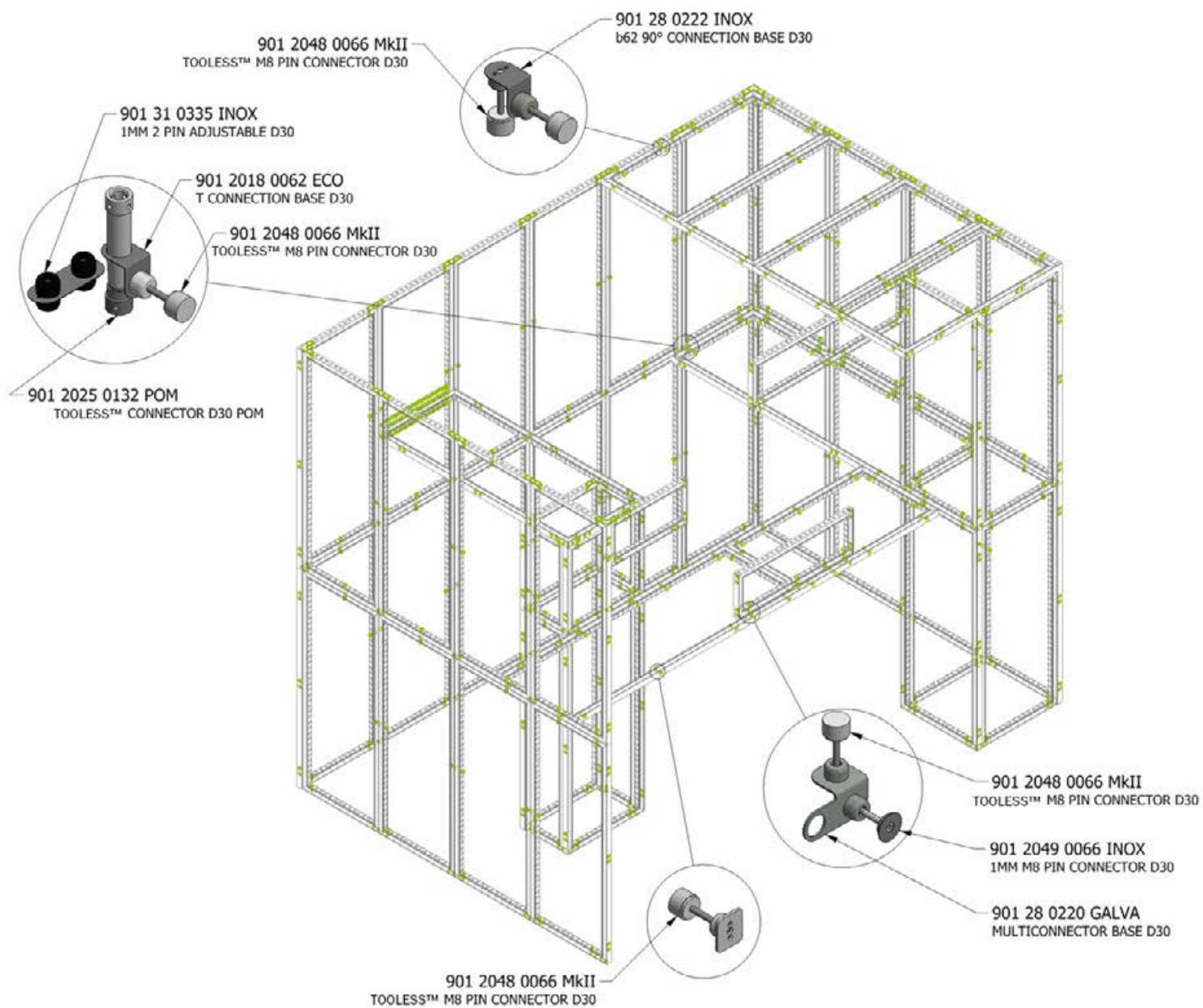




Chapter 7

Case 3





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