

## ADD/MODIFY BRACING – Modify Brace

Modified on: Tue, 12 Jan, 2021 at 9:15 PM

### Brace sizes

Brace	
Type	M_WF Plate LMBR 45x120
Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Type** – select the family and type which will be used for brace.

**Width (b)** – shows b size of selected type.

**Depth (h,d)** – shows h or d size of selected type.

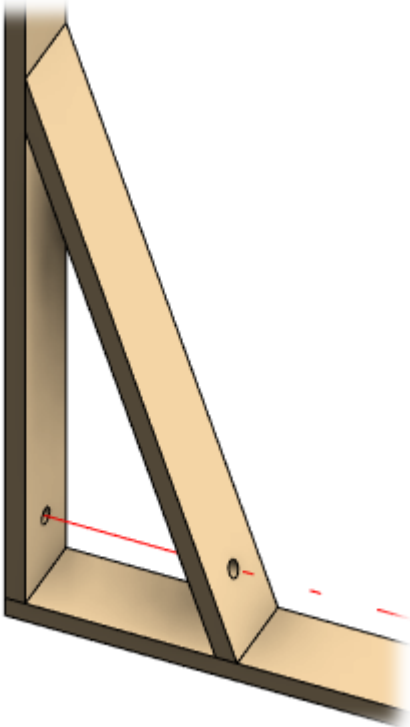
**Define Depth (h,d) by Layer Thickness** – **Wall+/Floor+/Roof+** will automatically create new type for selected family with new depth equal to selected wall/floor/roof layer thickness.

**Rotate 90°**

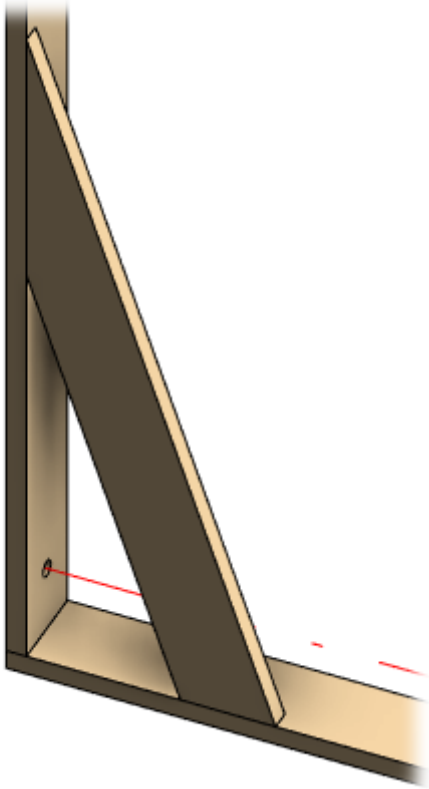
Brace	
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Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Rotate 90°** – brace can be rotated 90 degrees to its initial position.

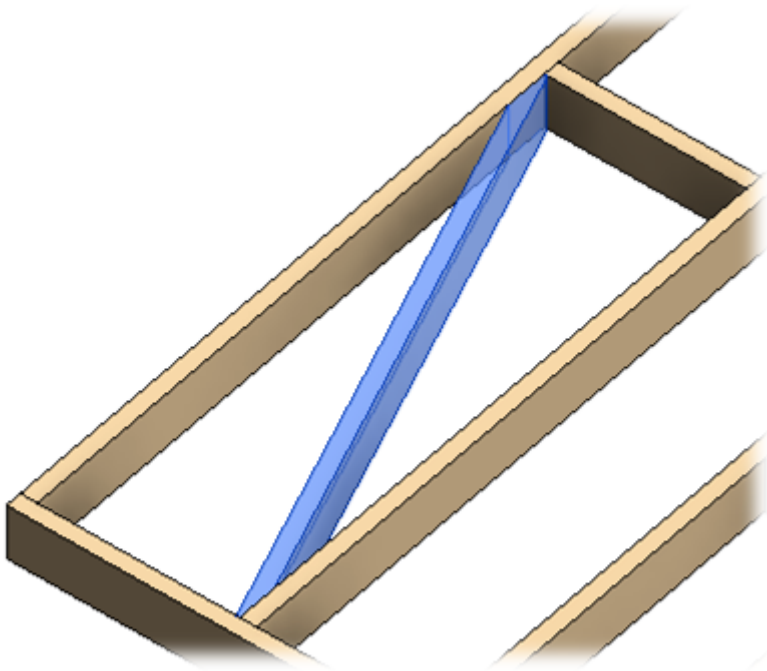
*Example: when **Rotate 90°** is switched ON:*



*Example: when **Rotate 90°** is switched OFF:*



*Example: when **Rotate 90°** is switched OFF:*

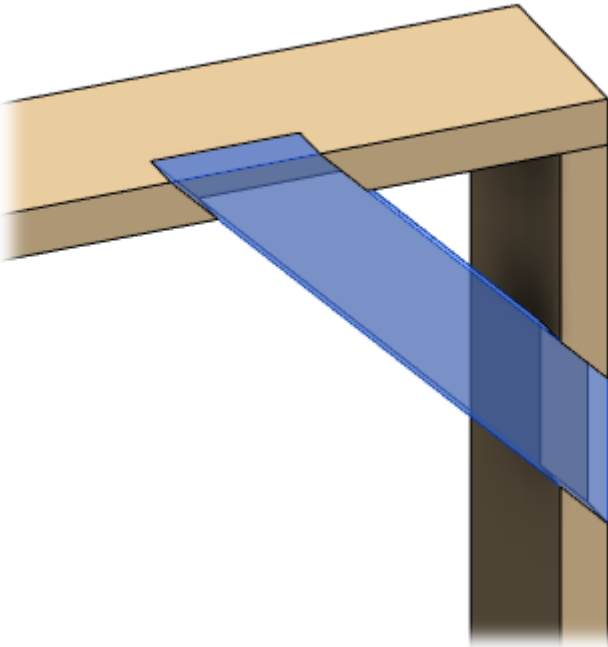


**Extend Ends**

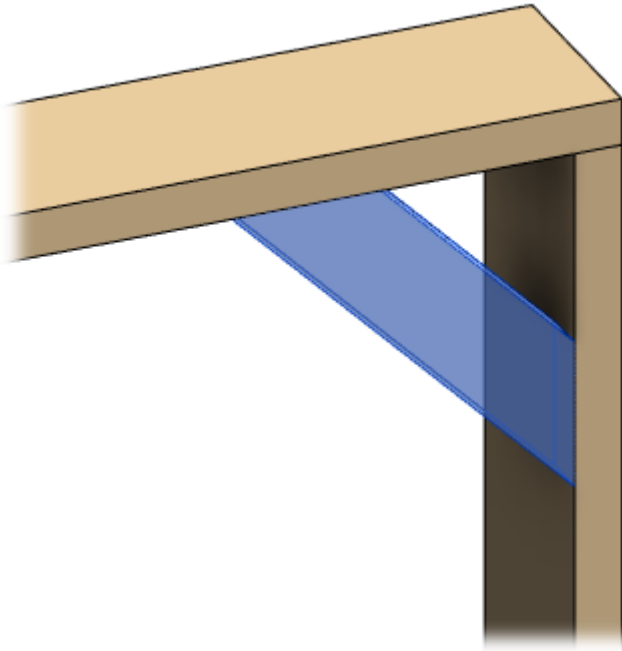
Brace	
Type	M_WF Plate LMBR 45x120
Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
<b>Extend Ends (new Families)</b>	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Extend Ends** - extends brace ends when it connects to other elements.

*Example: when **Extend Ends** is switched ON:*



*Example: when **Extend Ends** is switched OFF:*



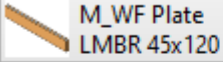
## Rotate 180°

Brace	
Type	M_WF Plate LMBR 45x120
Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Rotate 180°** – brace can be rotated 180 degrees to its initial position.

Mostly used for non-symmetrical wooden profiles or metal braces.

## Minimum/Maximum Angle

Brace	
Type	
Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Minimum/Maximum Angle** – define angle limits for adding a brace.

### Cut Studs

*(in Wall+, Wall+M)*

### Cut Joists

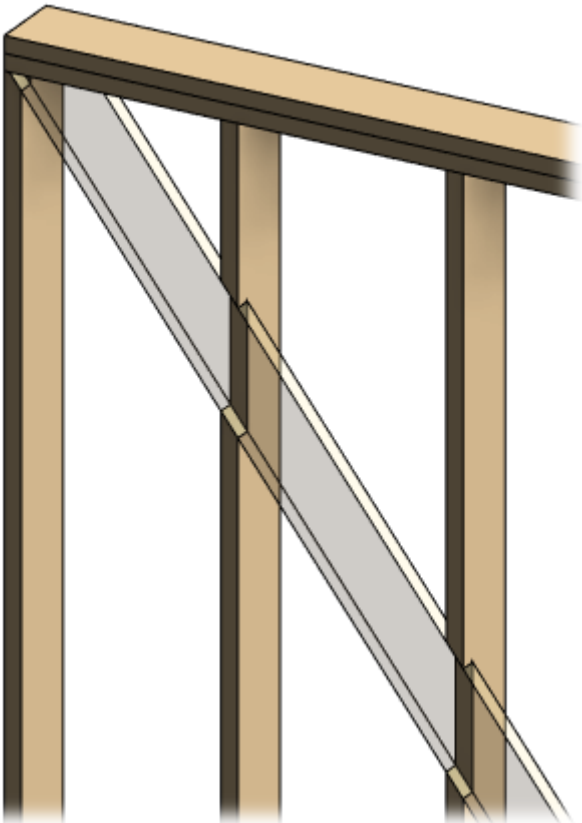
*(in Floor+, Floor+M, Roof+, Roof+M)*

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Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

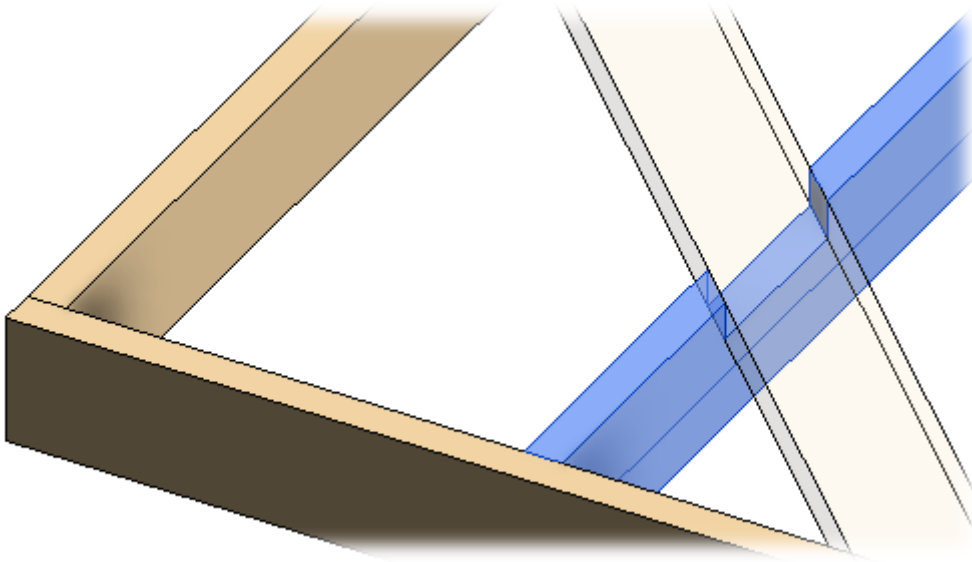
**Cut Studs/Joists** – select brace and stud/joist connection cutting type.

Possible options: **Don't Cut**, **Cut Studs/Joists**, and **Cut Bracing**.

*Example with wood wall: when **Cut Studs** is selected:*



*Example with wood floor: when **Cut Joists** is selected:*



## Cut Bridging/Nogging

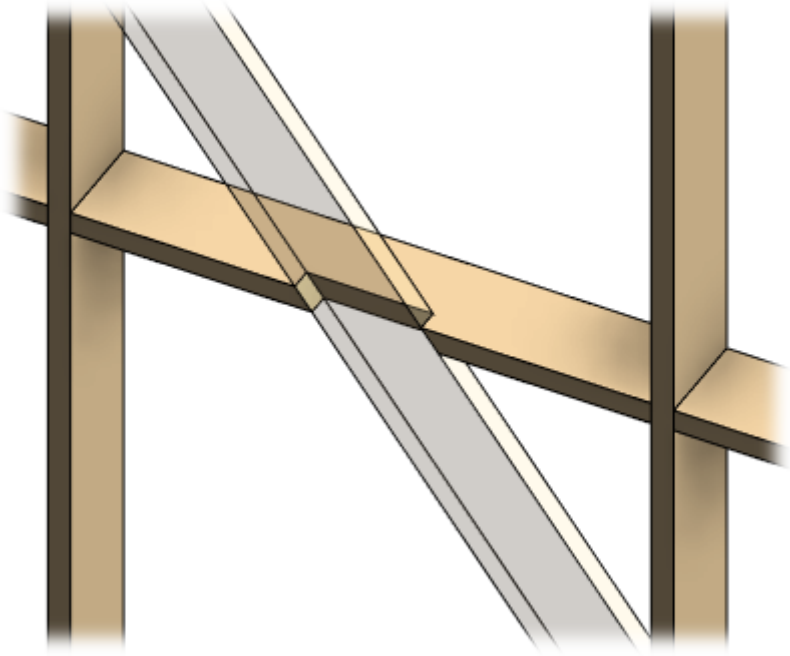
Brace	
Type	M_WF Plate LMBR 45x120
Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Cut Bridging/Nogging** – select brace and bridging/nogging connection cutting type.

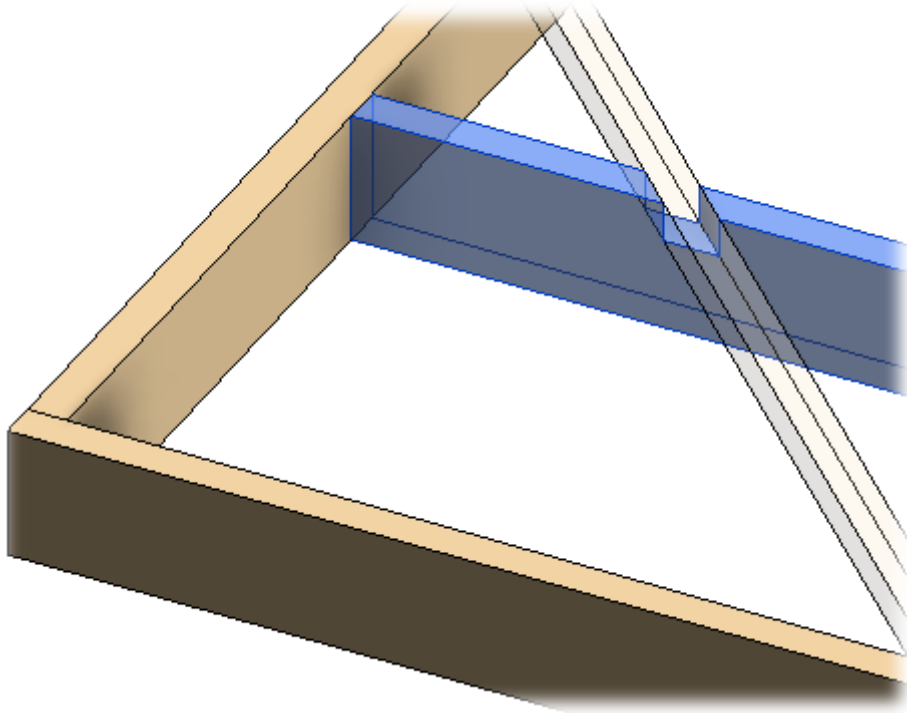
Possible options: **Don't Cut**, **Cut Bridging/Nogging** and **Cut Bracing**.

*Example with wood wall: when **Cut Bridging/Nogging** is selected:*





*Example with wood floor: when **Cut Bridging/Nogging/Blocking** is selected:*



**Brace Connection Offset from Stud or Plate/Bridging/Nogging**

*(in Wall+, Wall+M)*

**Brace Connection Offset from Joist or Plate/Bridging/Nogging**

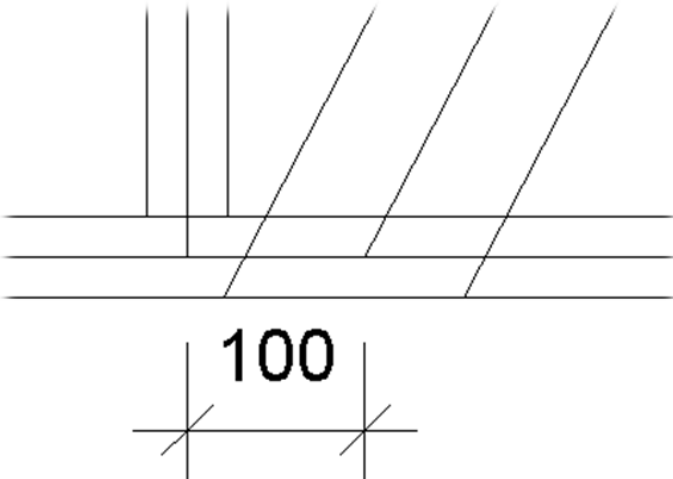
*(in Floor+, Floor+M, Roof+, Roof+M)*

Brace	
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Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
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Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Brace Connection Offset from Stud/Joist** – brace offset from connection point with a stud/joist.

**Brace Connection Offset from Plate/Bridging/Nogging** – brace offset from connection point with a plate, bridging, or nogging.

*Example: when **Brace Connection Offset from Stud/Joist** = 100:*



### Placement Type (in older versions)

Wall+. Modify Brace. Layer: Structure. Framing Configuration: Frame: Frame

Corner Brace

Use Main Types

Type M\_WF Plate : LMBR 45x100

Width (b) 4.5

Depth (h,d) 10

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

Rotate 180°

Minimum Angle 0

Maximum Angle 90

Cut Top/Bottom Plates

Cut Studs Cut Studs

Cut Bridging/Nogging Cut Bridging/Nogging

Brace Connection Offset from Stud/Plate 300

Brace Connection Offset from Plate/Bridging/Nogging 200

Placement Type Fixed Angle

Angle 45

Frame Side External

Build in Place

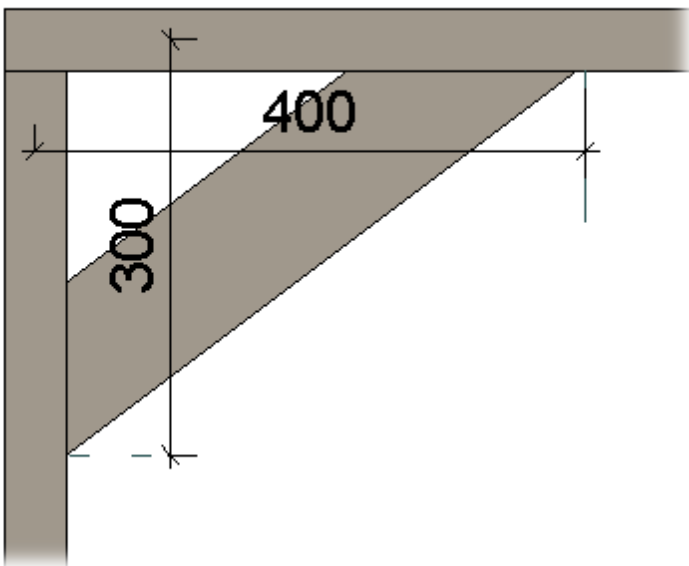
OK Cancel

*Special options for corner braces:*

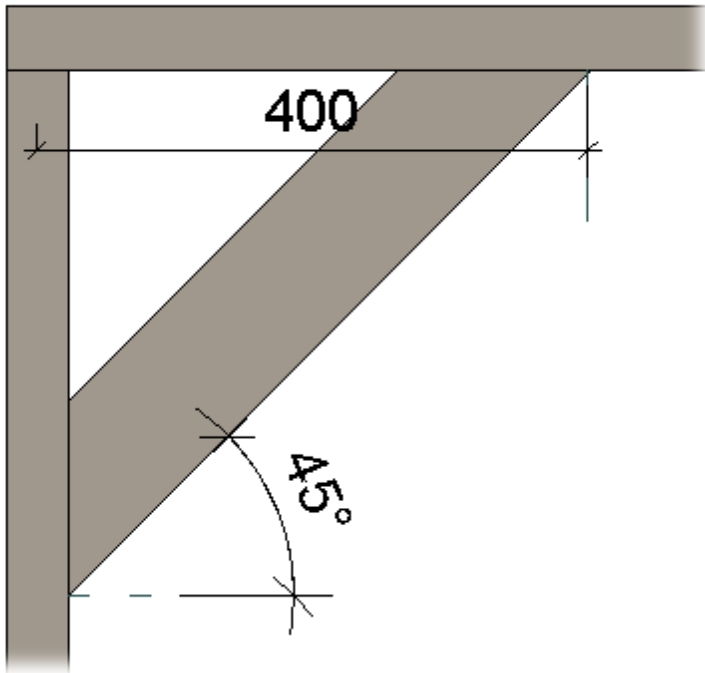
**Placement Type** – select a corner brace placement type: by offsets or fixed angle.

**Angle** – define corner brace placement angle if **Placement Type** = **Fixed Angle**.

*Example: when **Placement Type** = by offsets and **Brace Connection Offset from Stud** = 400, **Brace Connection Offset from Plate/Bridging/Nogging** = 300:*



Example: when **Placement Type = Fixed Angle**, **Angle = 45** and **Brace Connection Offset from Stud = 400**:

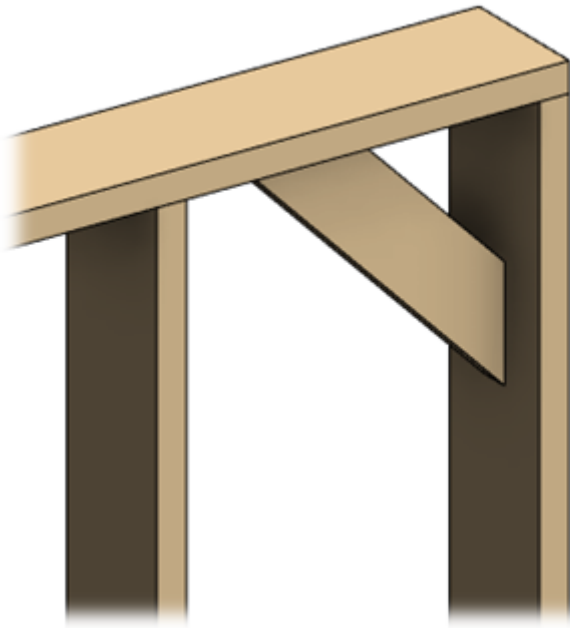


## Frame Side

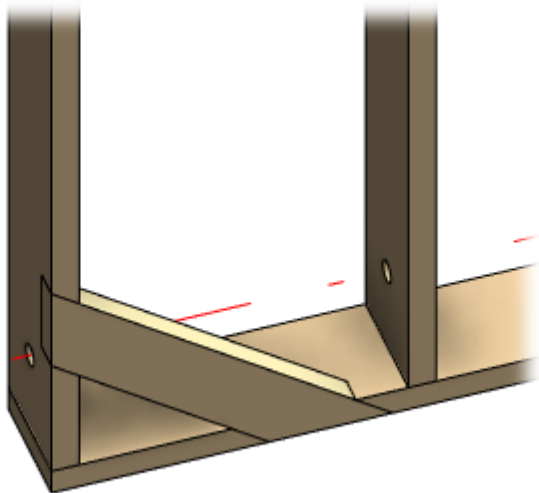
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Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Frame Side** – select whether a brace should be applied in the center, external or internal side of the frame.

*Example: when **Frame Side** = **Center**:*



*Example: when **Frame Side** = **External**:*



## **Build in Place**

Brace	
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Width (b)	4.5
Depth (h,d)	12
Define Depth (h,d) by Layer Thickness	<input type="checkbox"/>
Rotate 90°	<input type="checkbox"/>
Extend Ends (new Families)	<input checked="" type="checkbox"/>
Rotate 180°	<input type="checkbox"/>
Minimum Angle	0
Maximum Angle	90
Cut Studs	Cut Studs
Cut Bridging/Nogging	Cut Bridging/Nogging
Brace Connection Offset from Stud	100
Brace Connection Offset from Plate/Bridging/Nogging	100
Frame Side	External
Build in Place	<input type="checkbox"/>

**Build in Place** – writes Yes/No information into the brace instance parameter if it is build-in-place or is prefabricated with whole wall/floor/roof frame. Later this parameter can be used in schedules or view filters.

*Example with wood wall:*

**Properties**

M\_WF Plate  
LMBR 45x100

Structural Framing (Other) (1) Edit Type

**Constraints**

Reference Level	Level 1
Start Level Offset	2977.5
End Level Offset	2577.5
Cross-Section Rota...	0.00°

**Geometric Position**

Start Extension	-31.8
End Extension	-31.8
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.0
z Justification	Origin
z Offset Value	0.0

**Construction**

#d	200.0
Build in Place	<input checked="" type="checkbox"/>
Insert_Left	<input type="checkbox"/>
Insert_Right	<input checked="" type="checkbox"/>
Row	0

Example with wood floor:

Properties

M\_MF Strap  
50x1

Structural Framing (Other) (1) Edit Type

Reference Level	Level 1
Start Level Offset	-115.0
End Level Offset	-115.0
Cross-Section Rotation	90.00°

Geometric Position

Start Extension	-22.5
End Extension	22.5
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.0
z Justification	Origin
z Offset Value	0.0

Construction

#d	15.00 cm
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
Assembly Mass	

