

General Mulling Information

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General Mull Information - Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. Some mulls can be done in the factory. Others would need to be done in the field. Some mulls create a certified assembly according to third-party testing.

Marvin Mull Options:

Marvin-Supplied

- Standard Mull (Ultimate): Two units mulled directly together without any reinforcement or space mulls between the frames.
- Standard Mull (Modern): 2 or more units mulled directly together with the standard 1/2" x 2 1/4" Aluminum; requires standard interior and exterior mull covers.
- 3/8" Mull Reinforcement (MRF): A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- Solid Space Mull: Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- LVL Mull Reinforcement: Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available from Marvin.
- Space Mull: Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- Stud Pocket: An exterior mull cap is applied to the units with a space in between the units to allow for installation of an existing structure in the opening. Units are shipped with temporary blocking. Remove before installation.

Field Supplied and Applied (these are other available mulling options, not provided by Marvin)

- Tube Mull: Tube aluminum or steel used to reinforce mulled assemblies.
- Flat Mull: Flat Steel or Aluminum used to reinforce mulled assemblies.
- These reinforcement types must be primed to prevent corrosion.

Anchoring

- Special considerations need to be made when installing mulled assemblies. Mullions create point loads that need to be transferred to the rough opening. For Marvin standard, MRF, LVL, and space mulls, the ends of the mull need to be fastened on each side of the splice with either jamb screws or brackets. Aluminum, steel and other structural mulls need to be anchored directly to the rough opening or building structure.

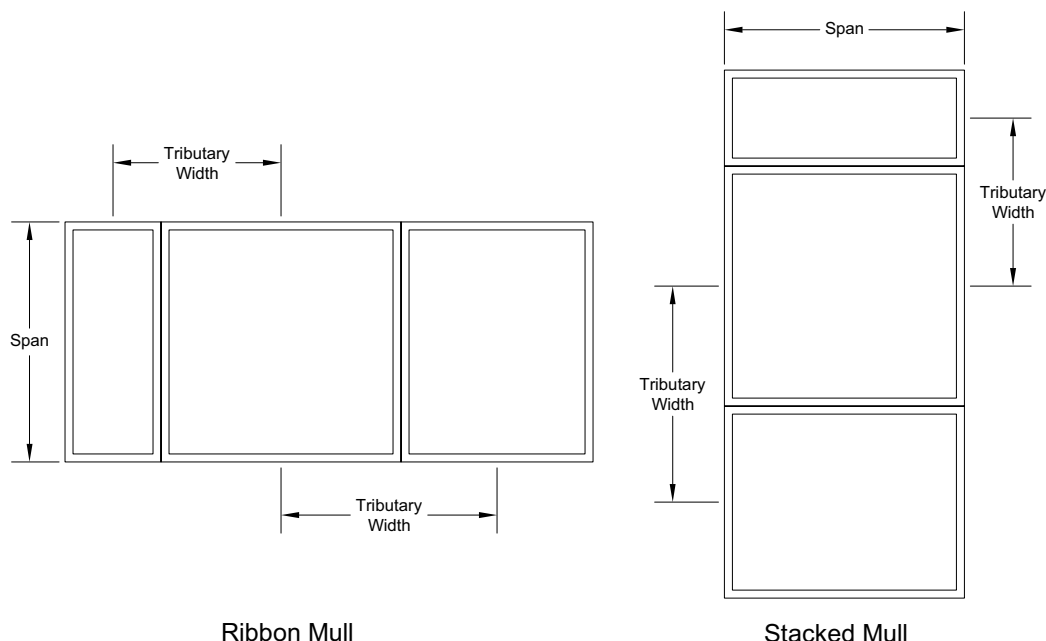
Section Details:

Cross sections will illustrate the mulling of two units.

Tributary and Span:

Tributary Width - The area supported by the mullion. In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull.

Span - The length of the mullion

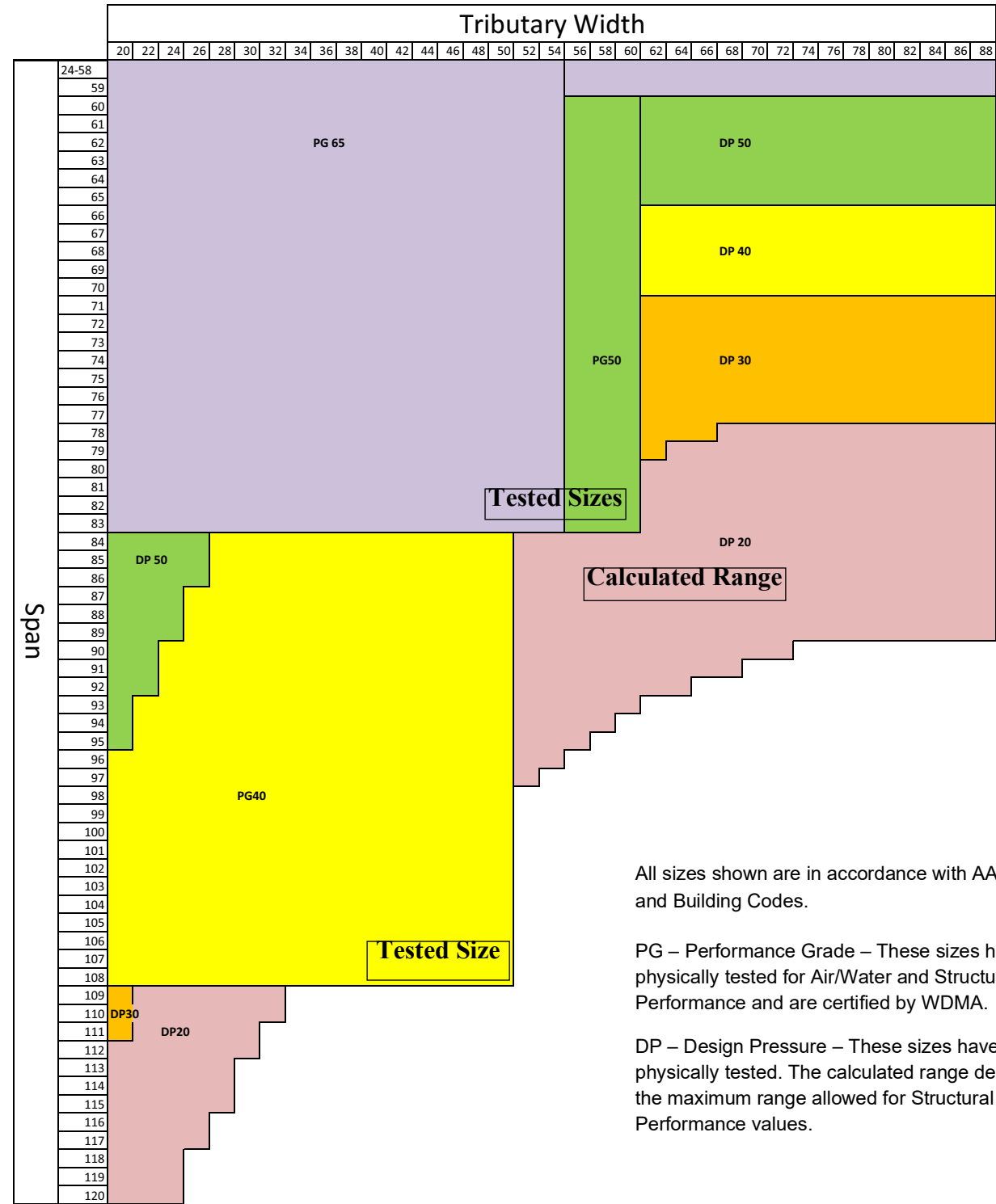


General Mull Information - Mull Types

Charts:

Mullion Performance Charts

In accordance with the International Building Code, mullion performance is determined through either physical testing or calculations. A combination of both methods has been used to develop the performance charts. Calculated mulls limit deflection to $L/175$ (L =length of mullion) and limit allowable stress to $2/3$ of the mull material's allowable stress. Physically tested mulls often outperform calculations and this will show up on the charts as jumps in performances.

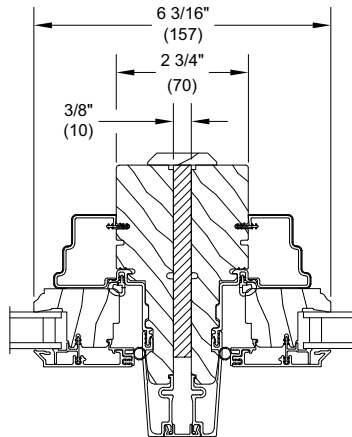


All sizes shown are in accordance with AAMA-450 and Building Codes.

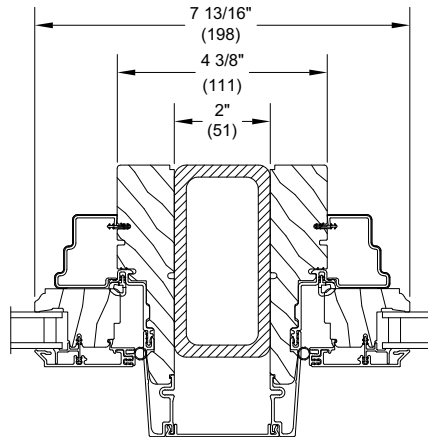
PG – Performance Grade – These sizes have been physically tested for Air/Water and Structural Performance and are certified by WDMA.

DP – Design Pressure – These sizes have not been physically tested. The calculated range demonstrates the maximum range allowed for Structural Performance values.

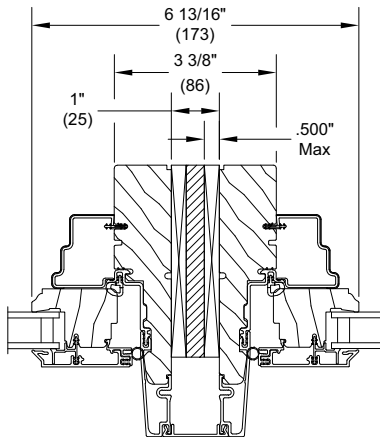
Field-Supplied and Applied Mull Types



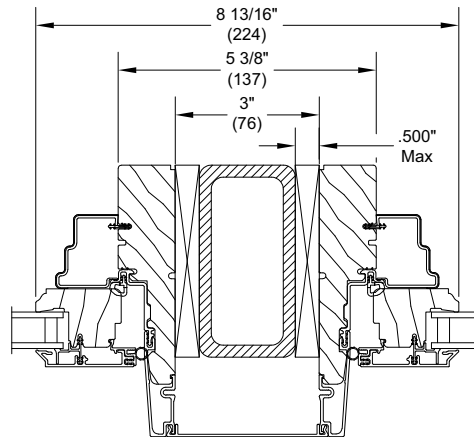
Flat Steel Tight Mull



Tube Steel Tight Mull



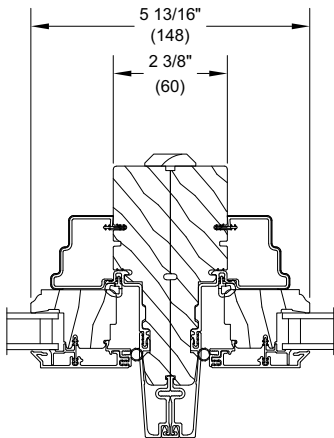
**Flat Steel Space Mull
With Shim Space**



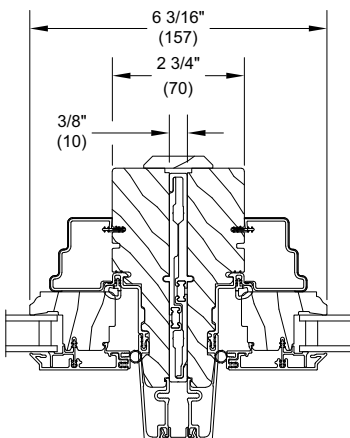
**Tube Steel Space Mull
With Shim Space**

Marvin Mull Types

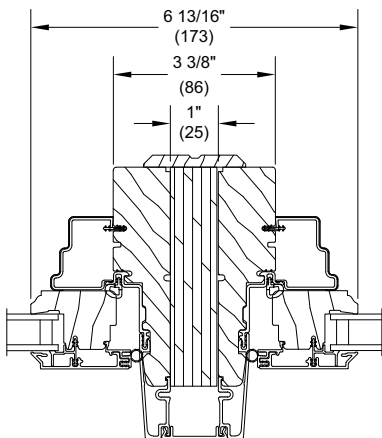
NOTE: Mulls displayed with Ultimate Casement frames, but other products can also be used.



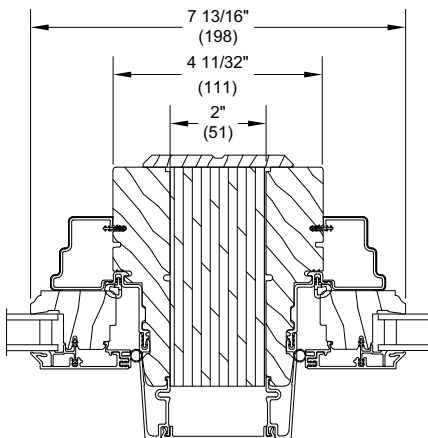
Standard



3/8" Mull Reinforcement



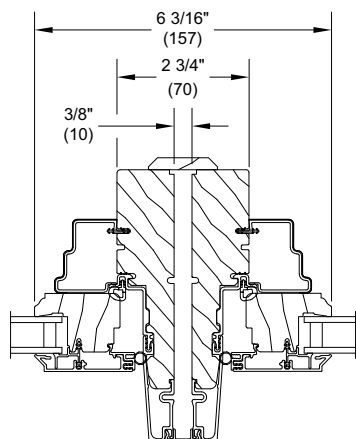
1" LVL



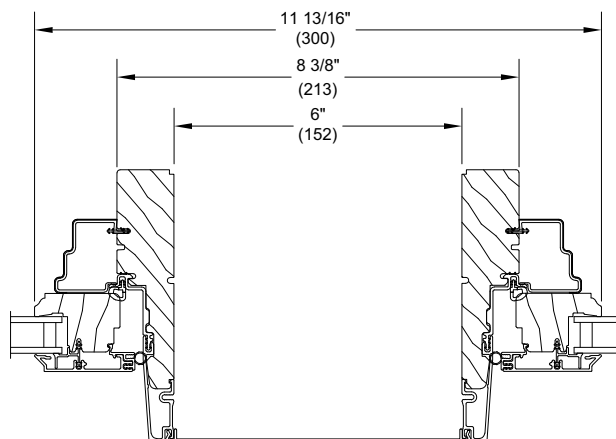
2" LVL

Marvin Mull Types

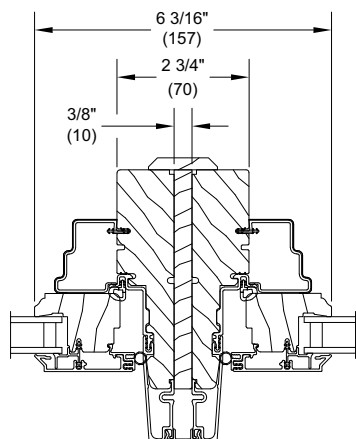
NOTE: Mulls displayed with Ultimate Casement frames, but other products can also be used.



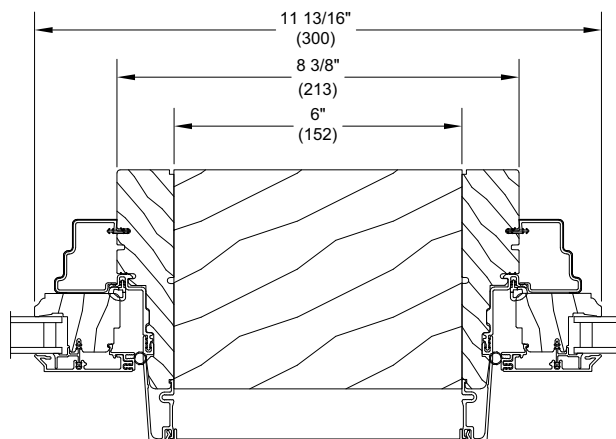
3/8" Space Mull



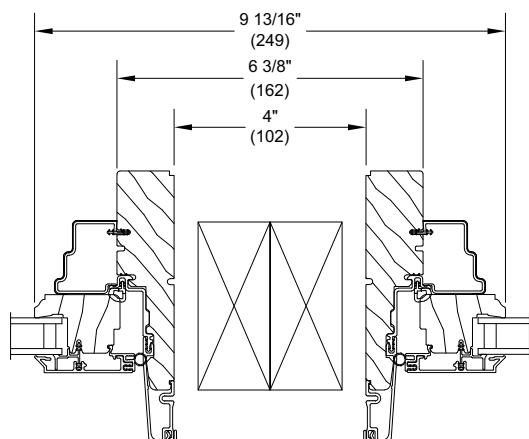
6" Space Mull



3/8" Solid Space Mull



6" Solid Space Mull



4" Stud Pocket Mull

Ultimate Casement Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Casement product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Ultimate Casement and Awning
- Ultimate Casement Picture
- Ultimate Venting Picture
- Ultimate Pushout Casement and Awning
- Ultimate Casement French and Ultimate Casement Push Out French
- IZ3

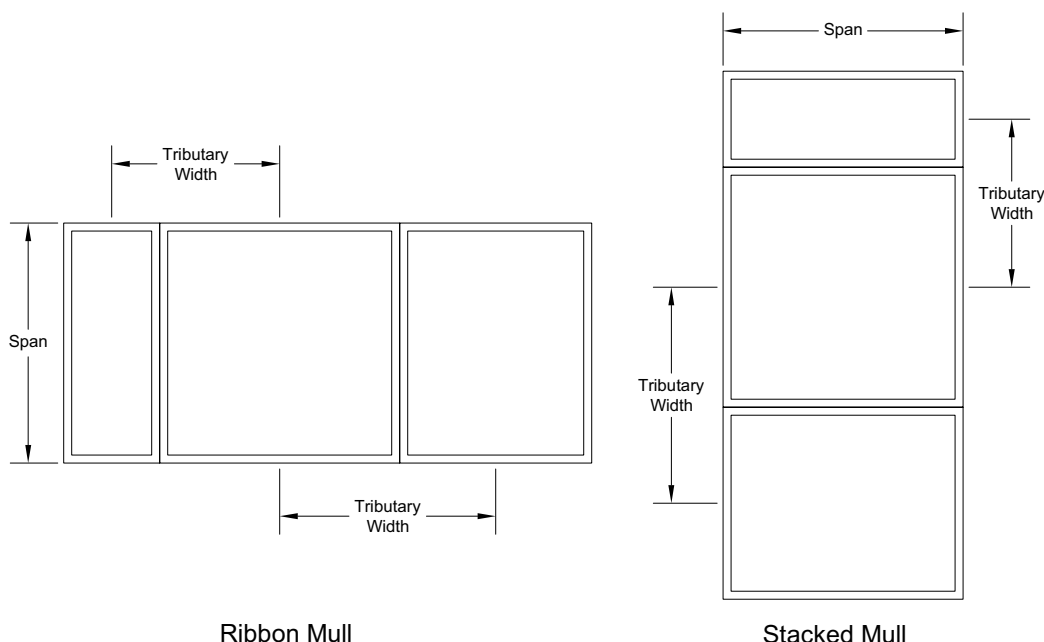
Certified Mull Installation Methods:

- Masonry Clips
- Jamb Screws
- Structural Brackets

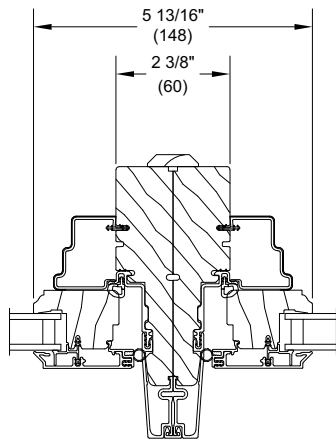
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

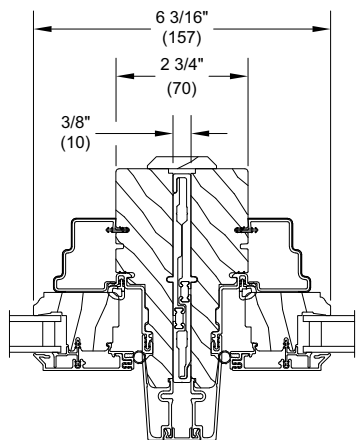
Span - The length of the mullion.



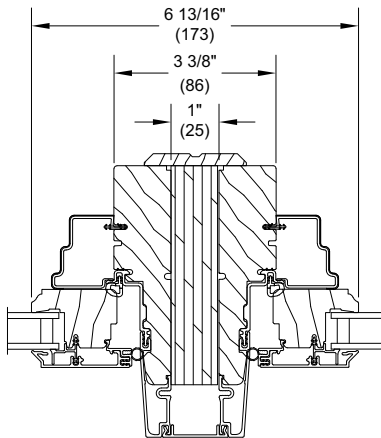
Section Details: Ultimate Casement Mulling Types



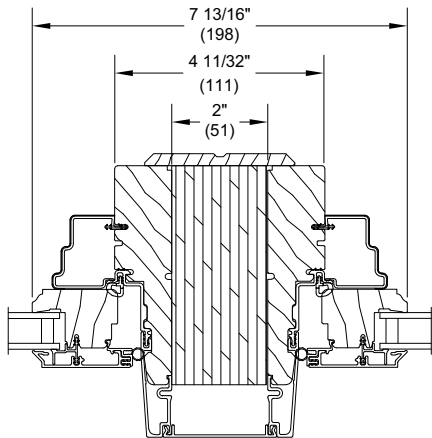
Standard



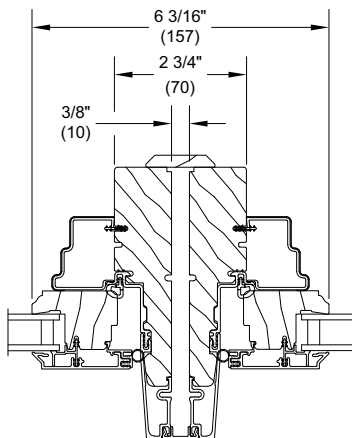
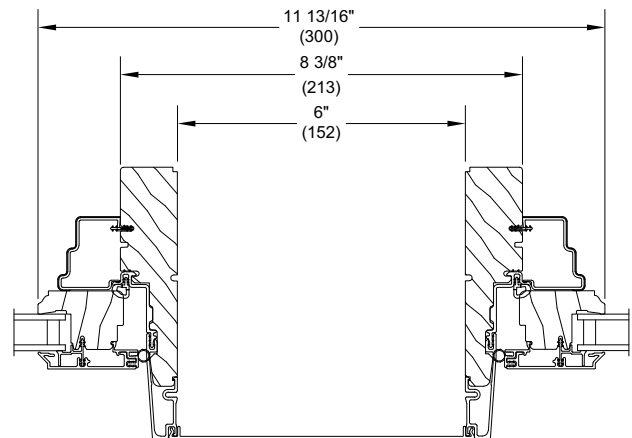
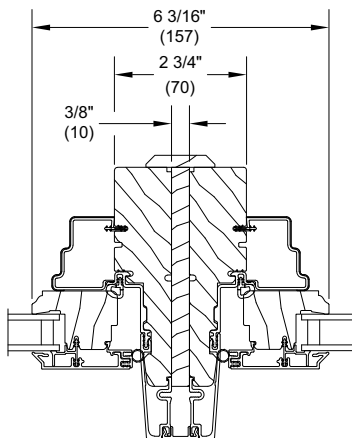
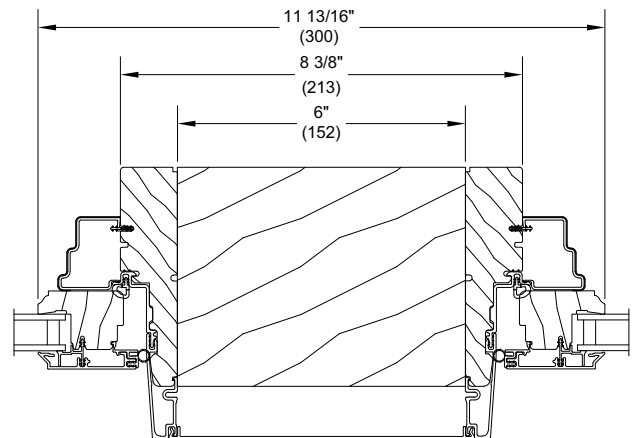
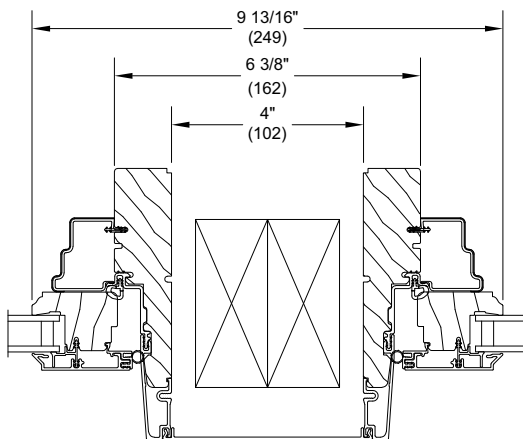
3/8" Mull Reinforcement



1" LVL



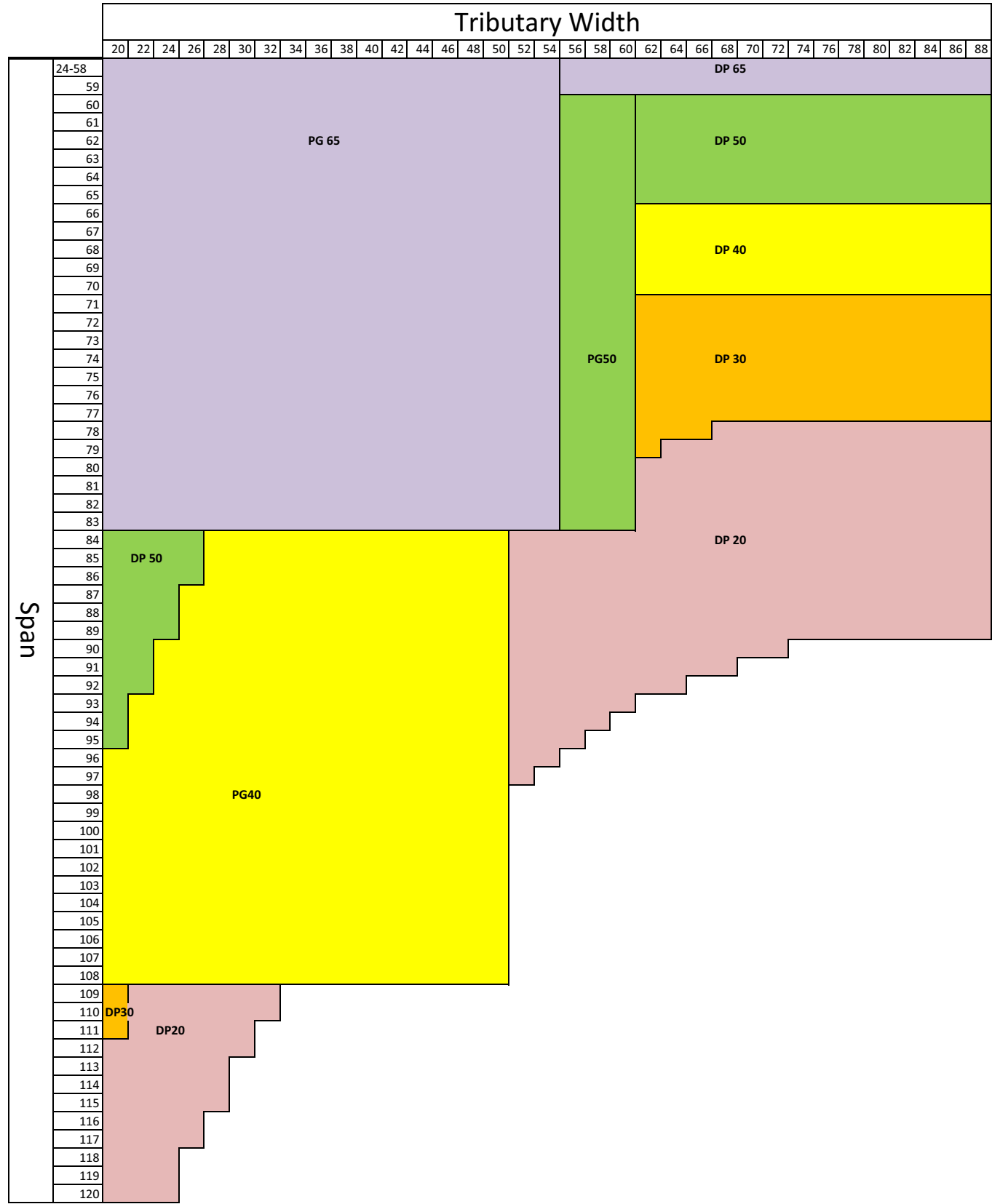
2" LVL

Section Details: Ultimate Casement Mulling Types (Continued)

3/8" Space Mull

6" Space Mull

3/8" Solid Space Mull

6" Solid Space Mull

4" Stud Pocket Mull

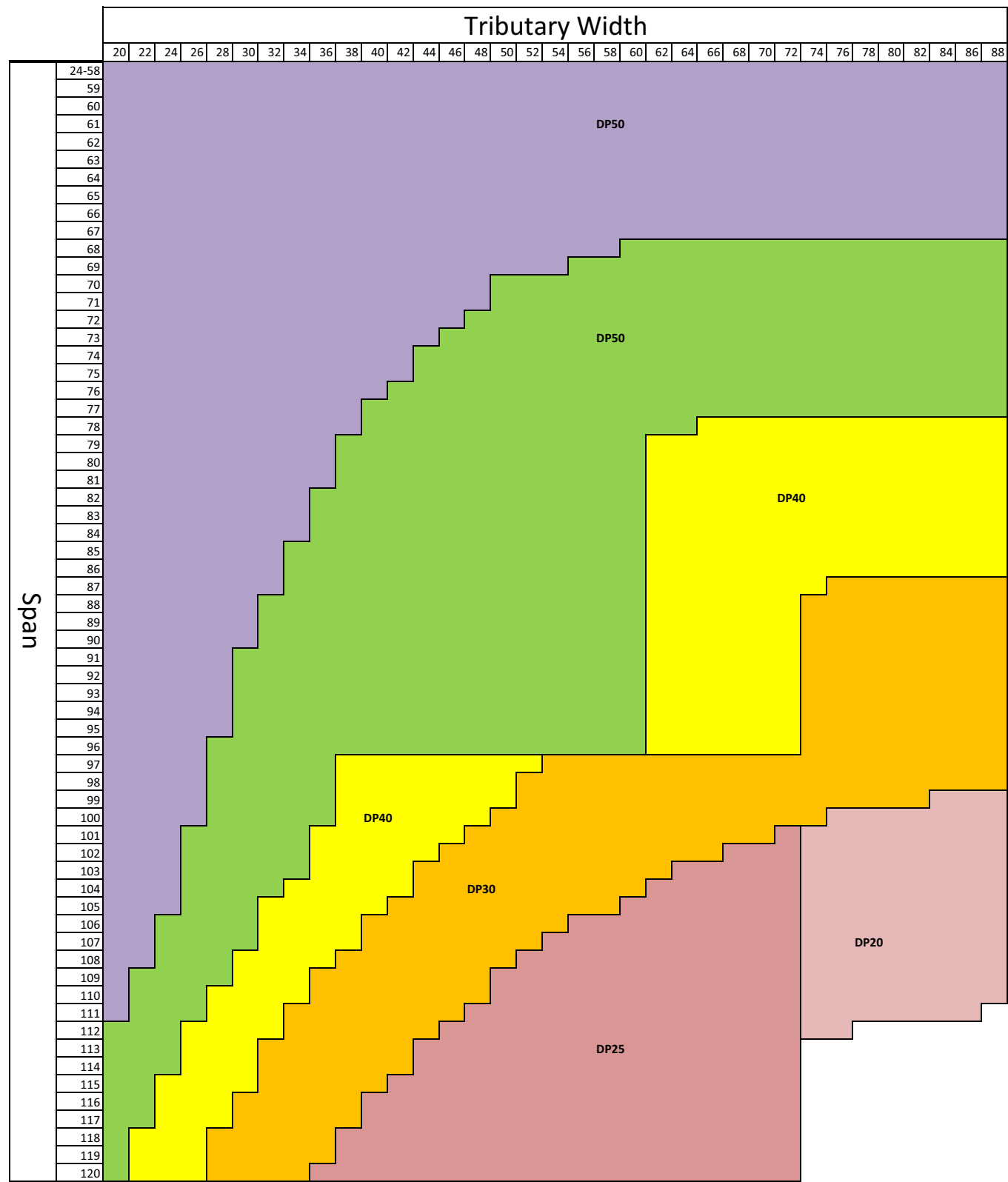
Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

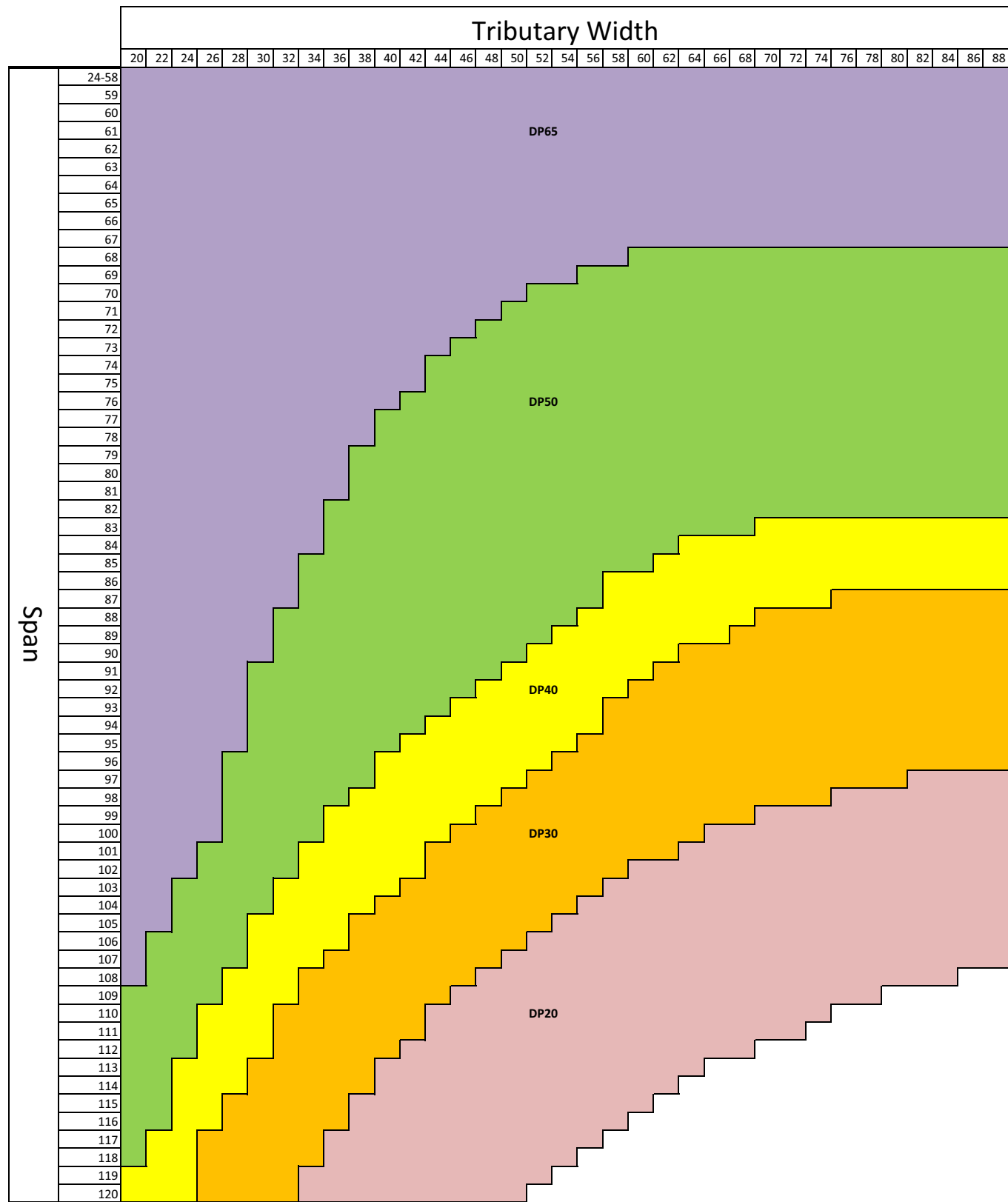
Ultimate Casement Mulling - Standard Frame (Ribbon or Stacked Assembly)



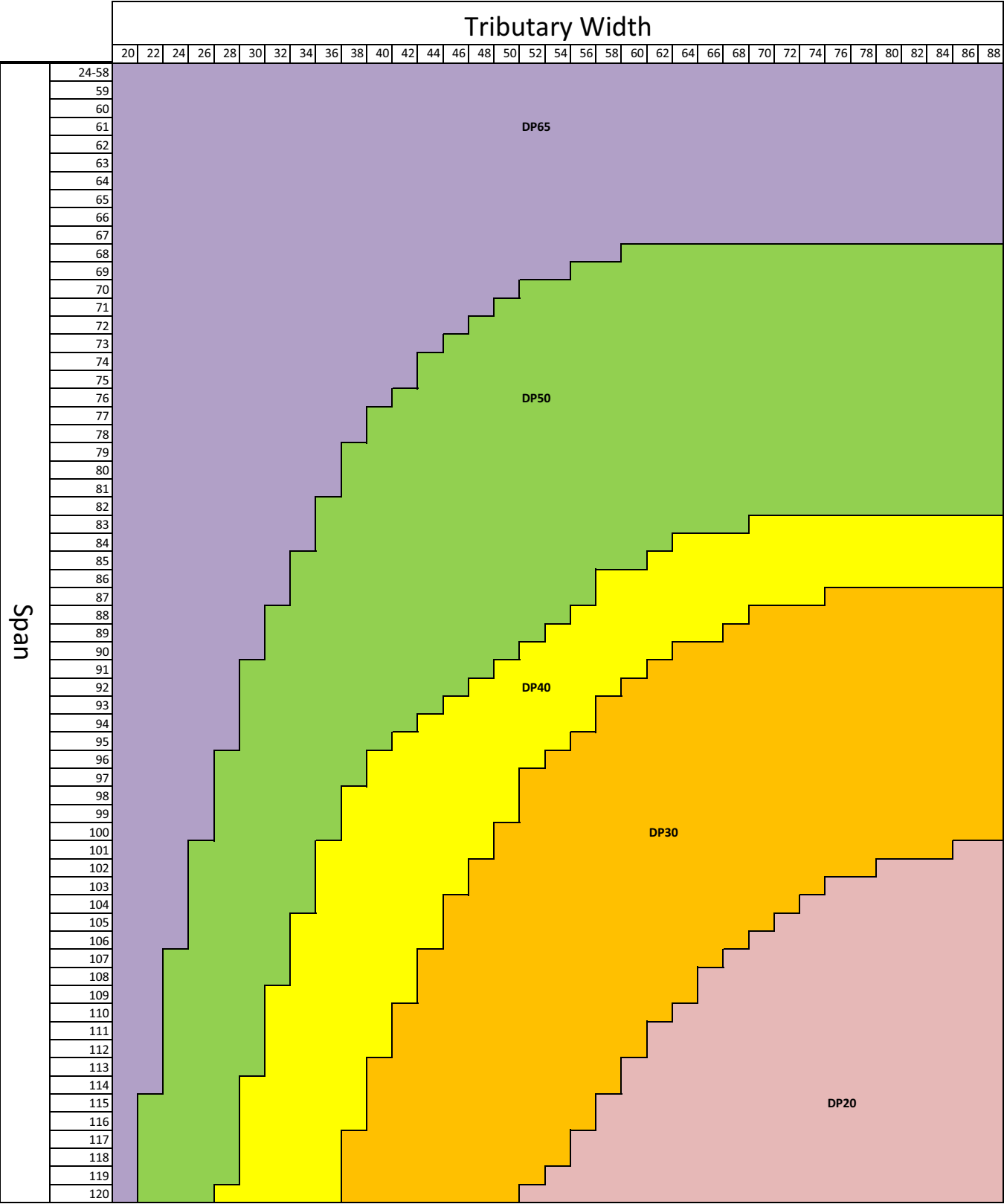
Ultimate Casement Mulling - 3/8" Mull Reinforcement (Ribbon or Stacked Assembly)



Ultimate Casement Mulling - 1" LVL (Ribbon or Stacked Assembly)

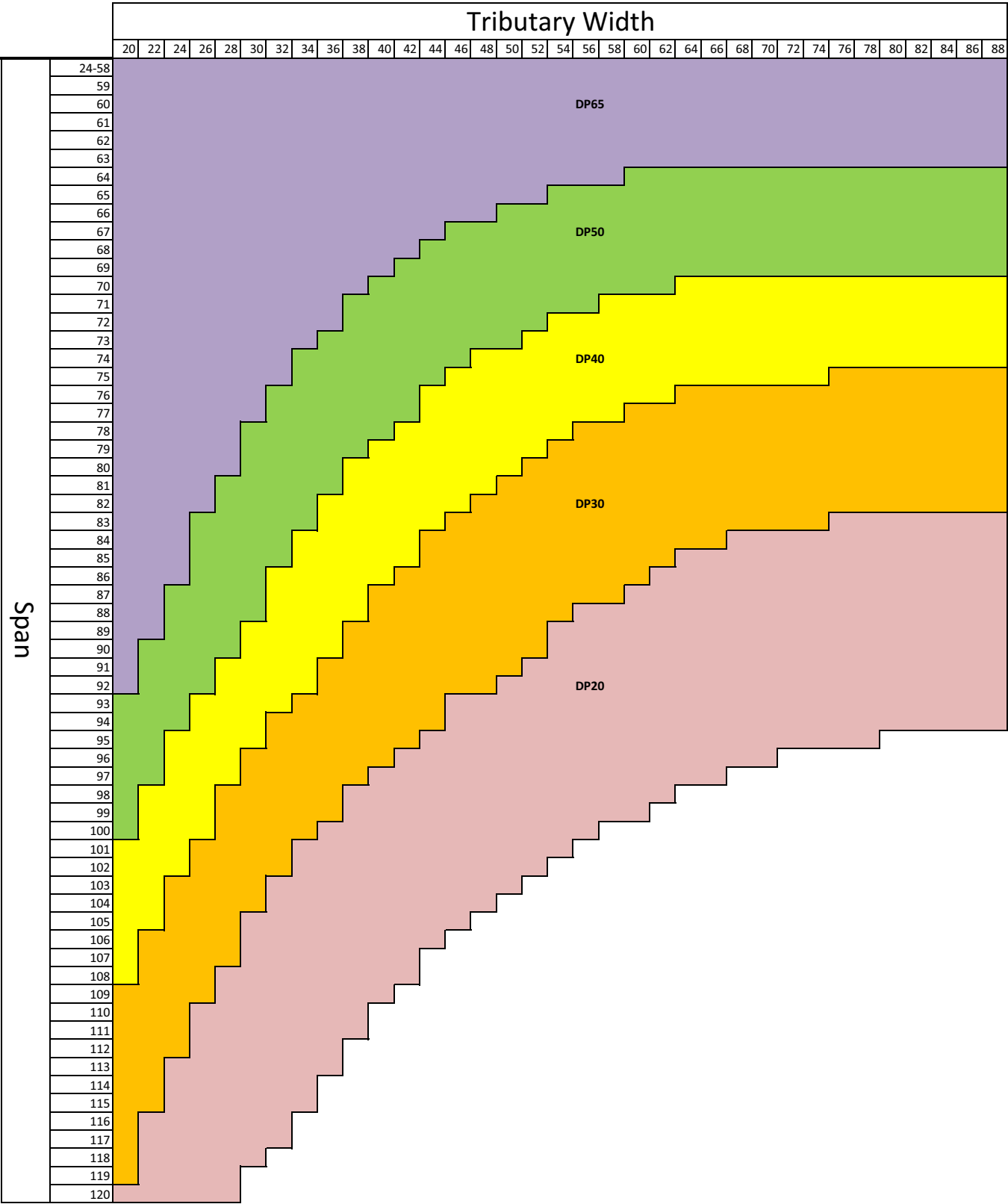


Ultimate Casement Mulling - 2" LVL (Ribbon or Stacked Assembly)

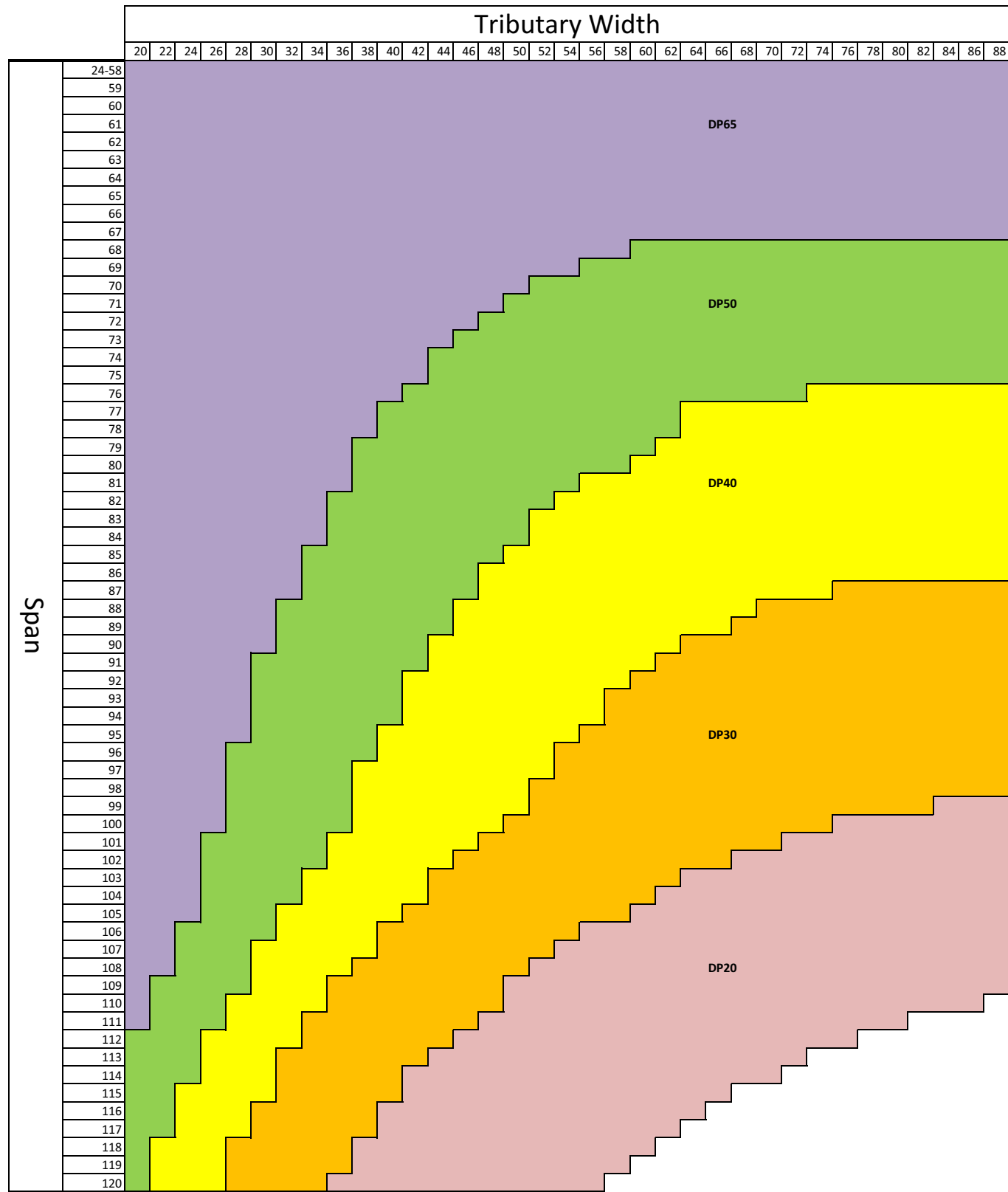


Ultimate Casement Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)

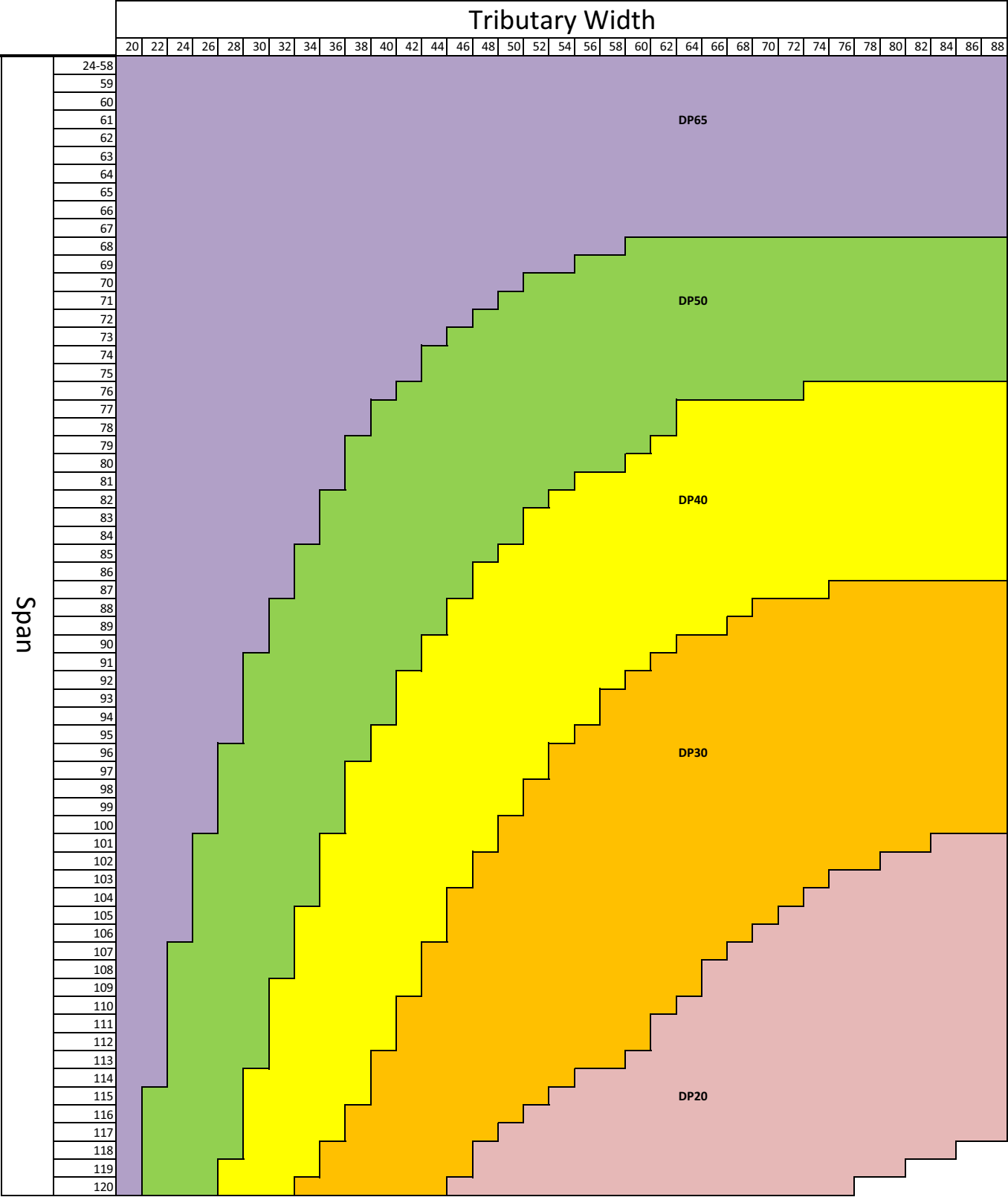
Ultimate Casement Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)



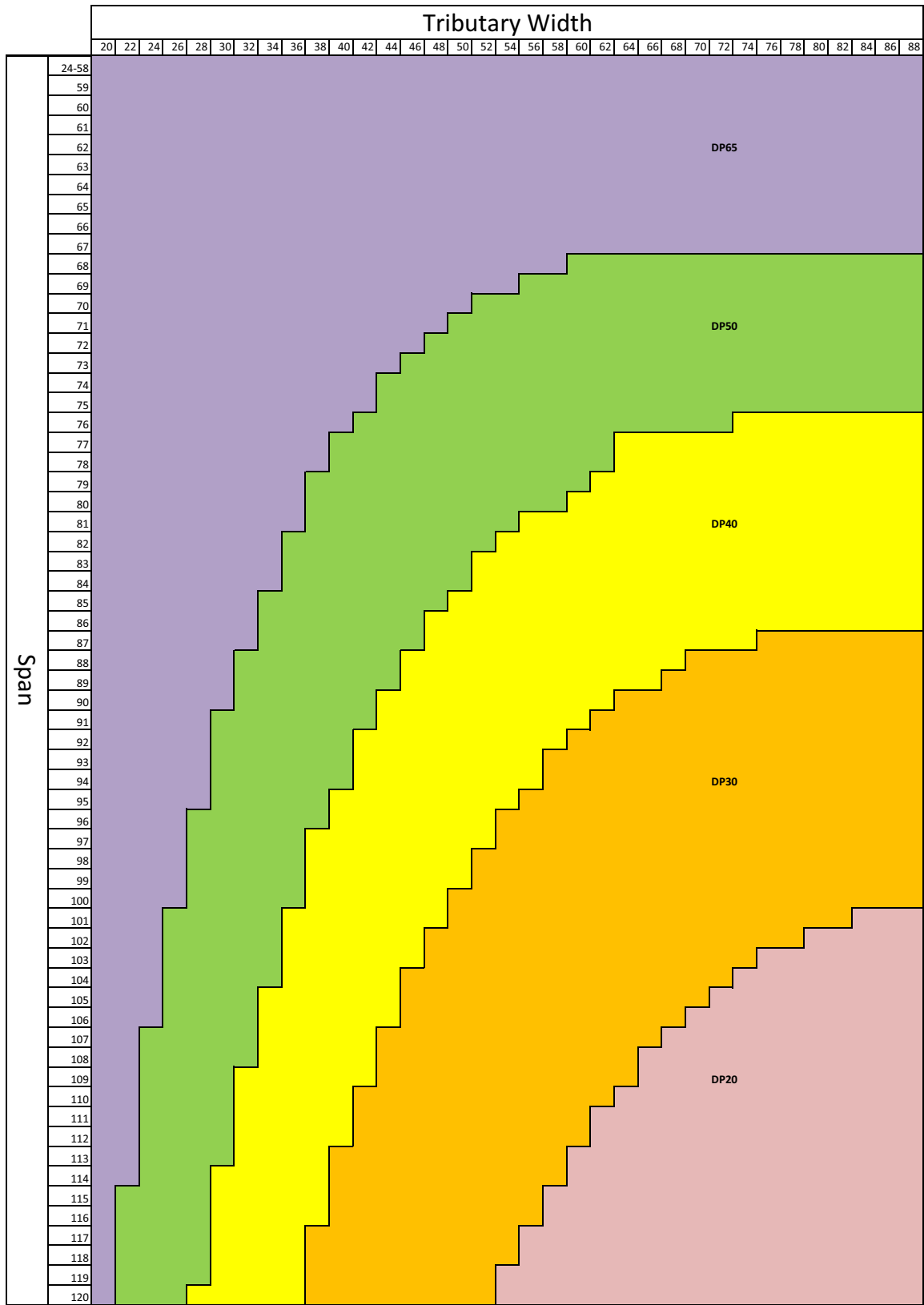
Ultimate Casement Mulling - 2" Solid Space Mull (Ribbon or Stacked Assembly)



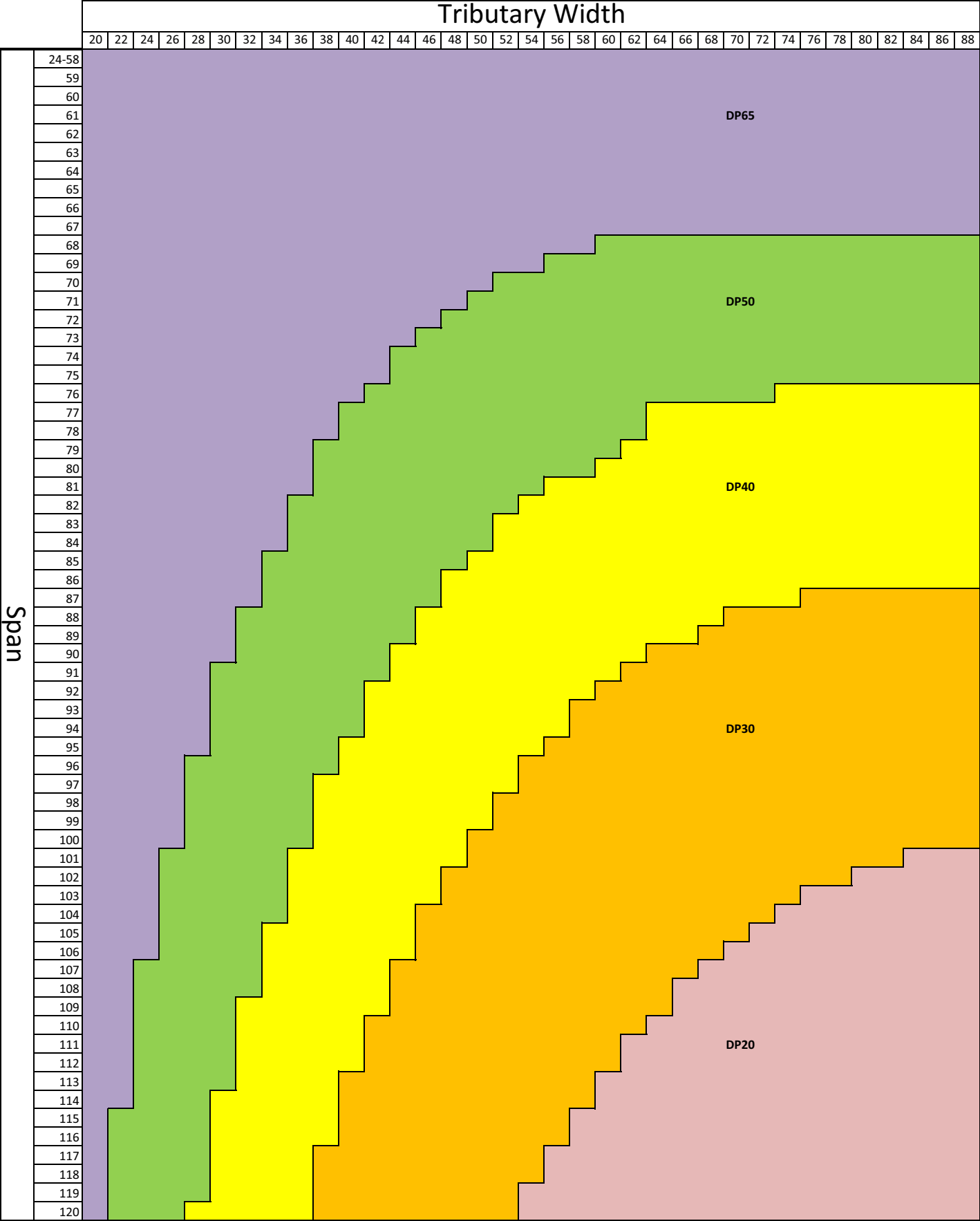
Ultimate Casement Mulling - 3" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Casement Mulling - 4" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Casement Mulling - 6" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Casement Narrow Frame Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Casement Narrow Frame product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Ultimate Casement Narrow Frame
- Ultimate Awning Narrow Frame
- Ultimate Casement Push Out Narrow Frame
- Ultimate Awning Push Out Narrow Frame
- Ultimate Casement/Awning Narrow Frame Picture

NOTE: Multi-High Multi-Wide Assemblies with any side that exceed 72" in either direction will be shipped with a temporary blocking around the entire perimeter of the assembly to provide support during shipping and handling.

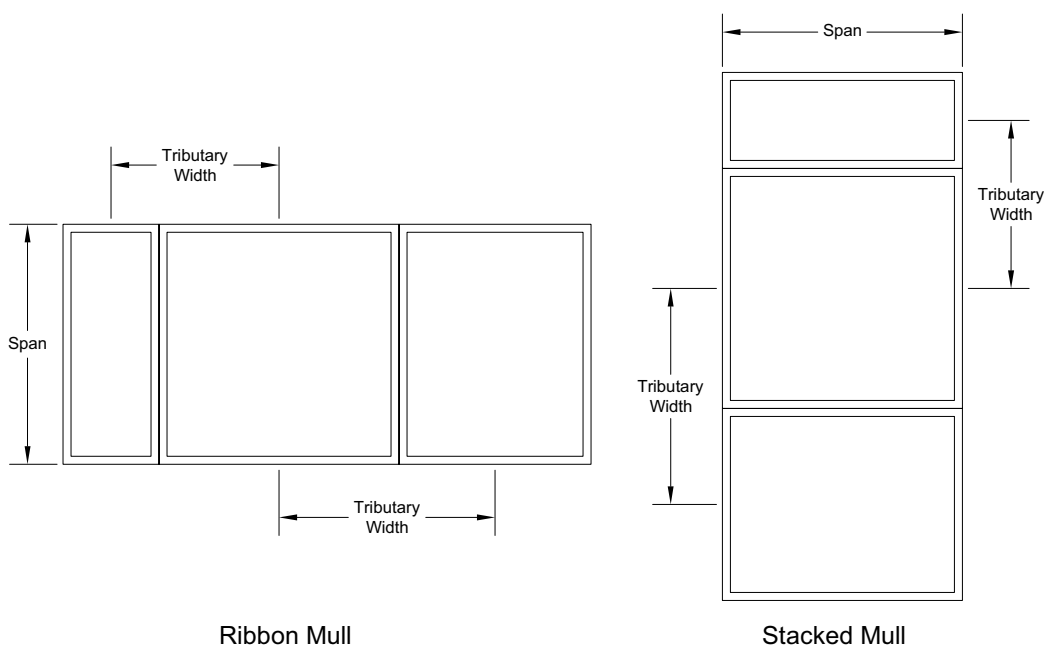
Certified Mull Installation Methods:

- Jamb Screws

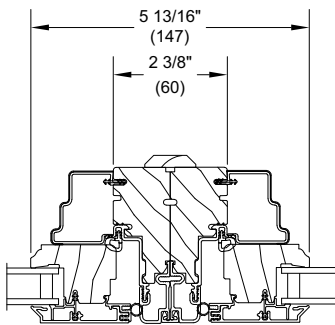
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

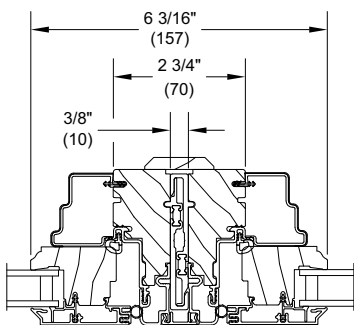
Span - The length of the mullion.



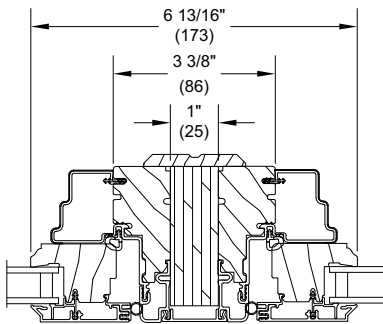
Section Details: Ultimate Casement Narrow Frame Mulling Types



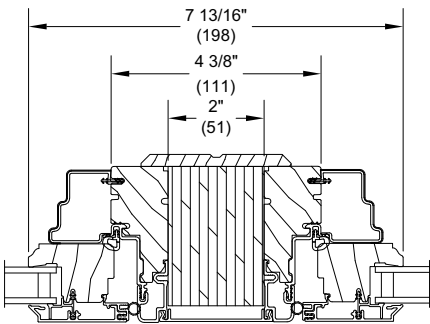
Standard



3/8" Mull Reinforcement

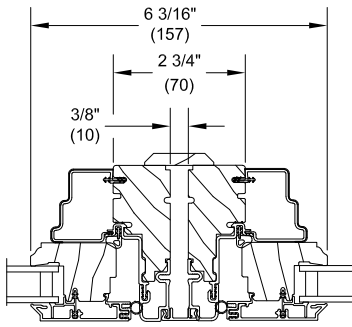


1" LVL

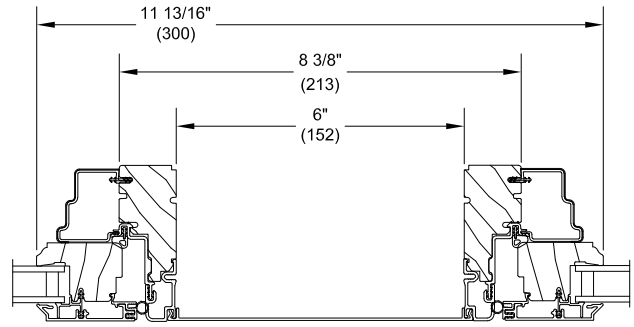


2" LVL

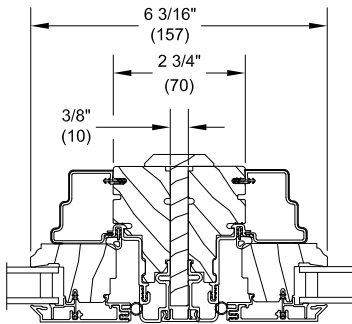
Section Details: Ultimate Casement Narrow Frame Mulling Types (Continued)



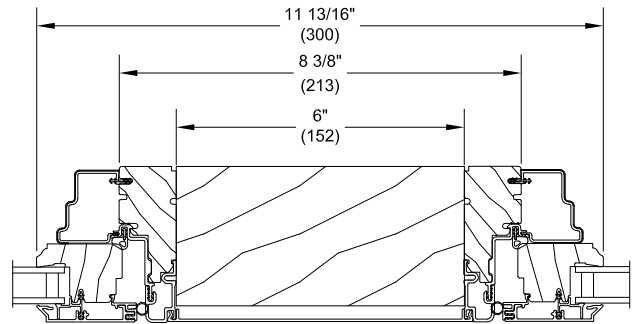
3/8" Space Mull



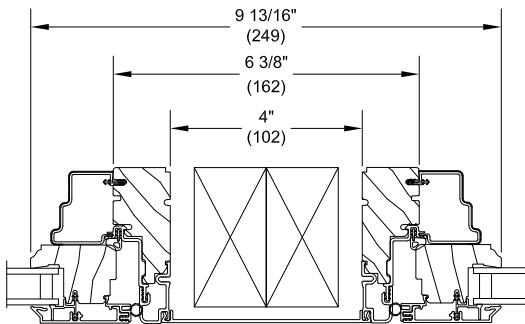
6" Space Mull



3/8" Solid Space Mull



6" Solid Space Mull

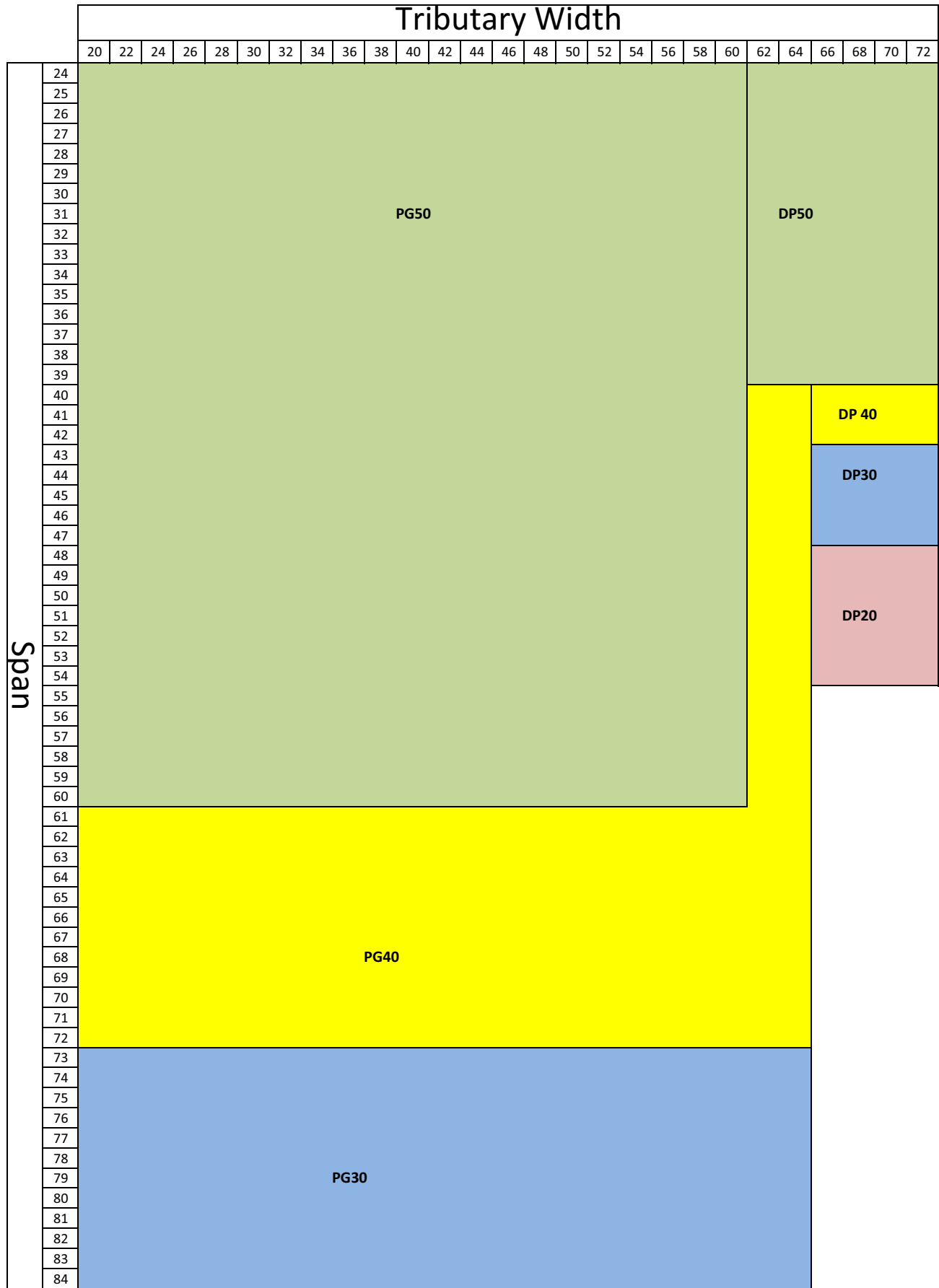


4" Stud Pocket Mull

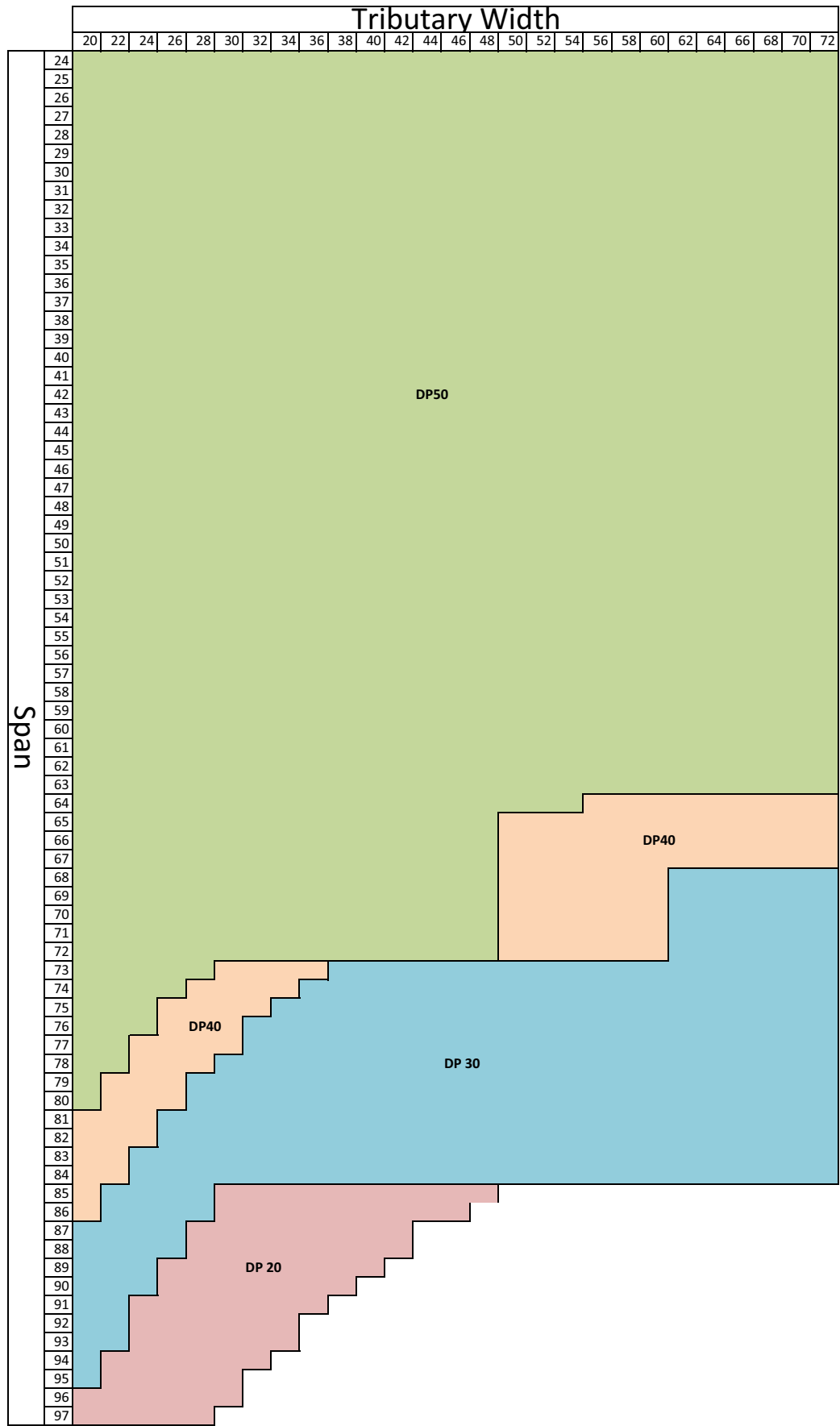
Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

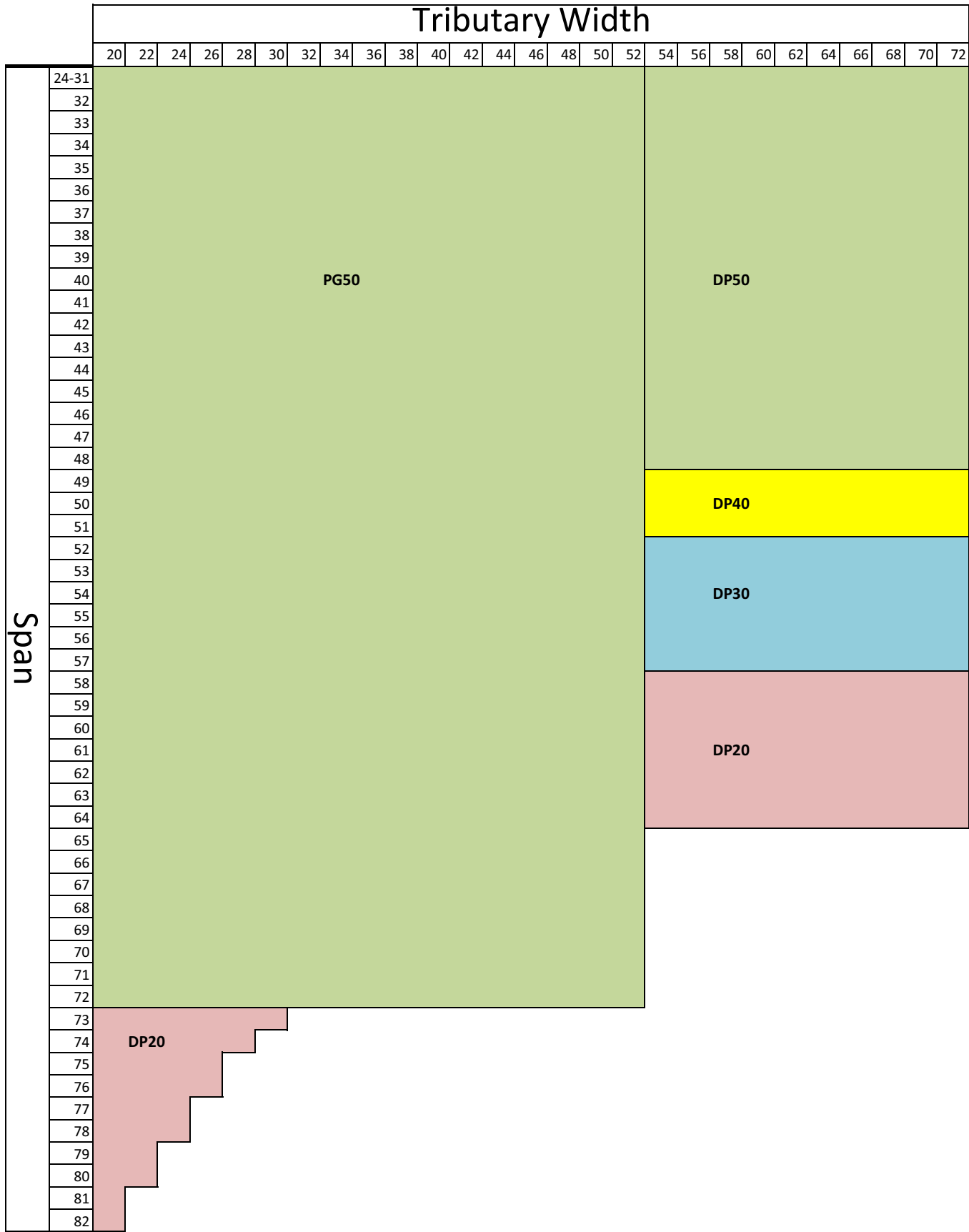
Ultimate Casement Narrow Frame Mulling-Standard Frame (Ribbon or Stacked Assembly)



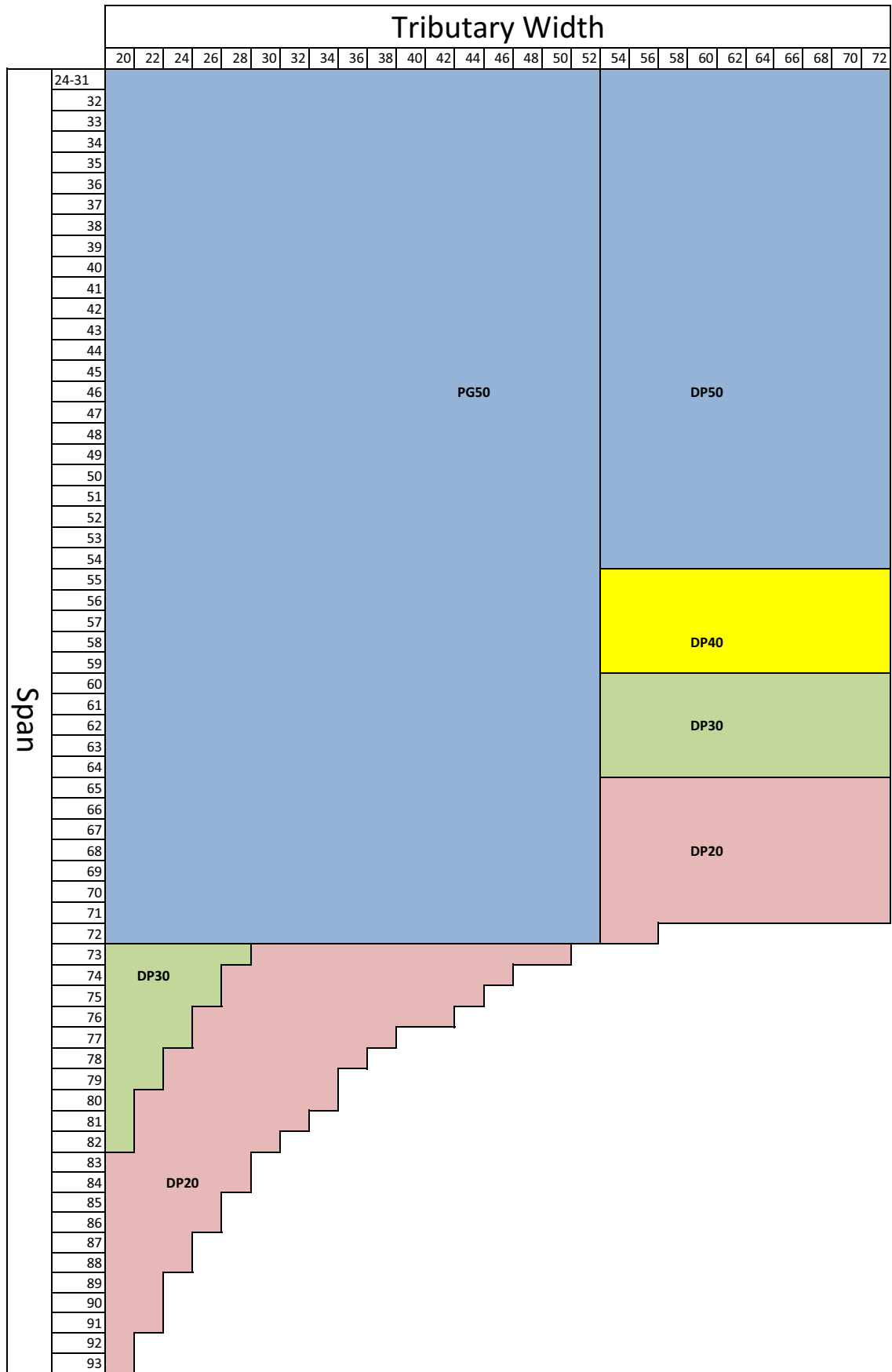
Ultimate Casement Narrow Frame Mulling - 3/8" Mull Reinforcement (Ribbon or Stacked Assembly)



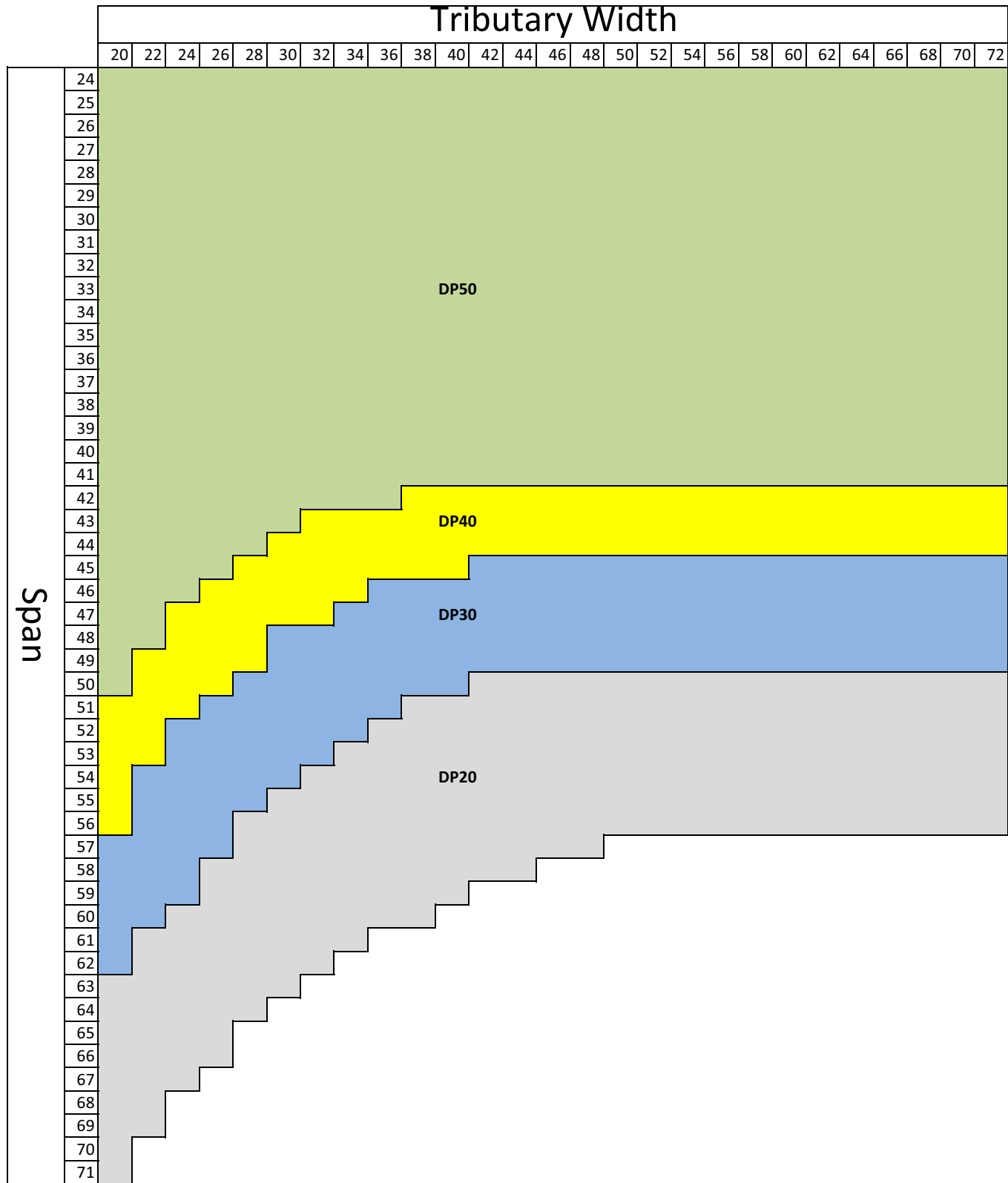
Ultimate Casement Narrow Frame Mulling - 1" LVL (Ribbon or Stacked Assembly)



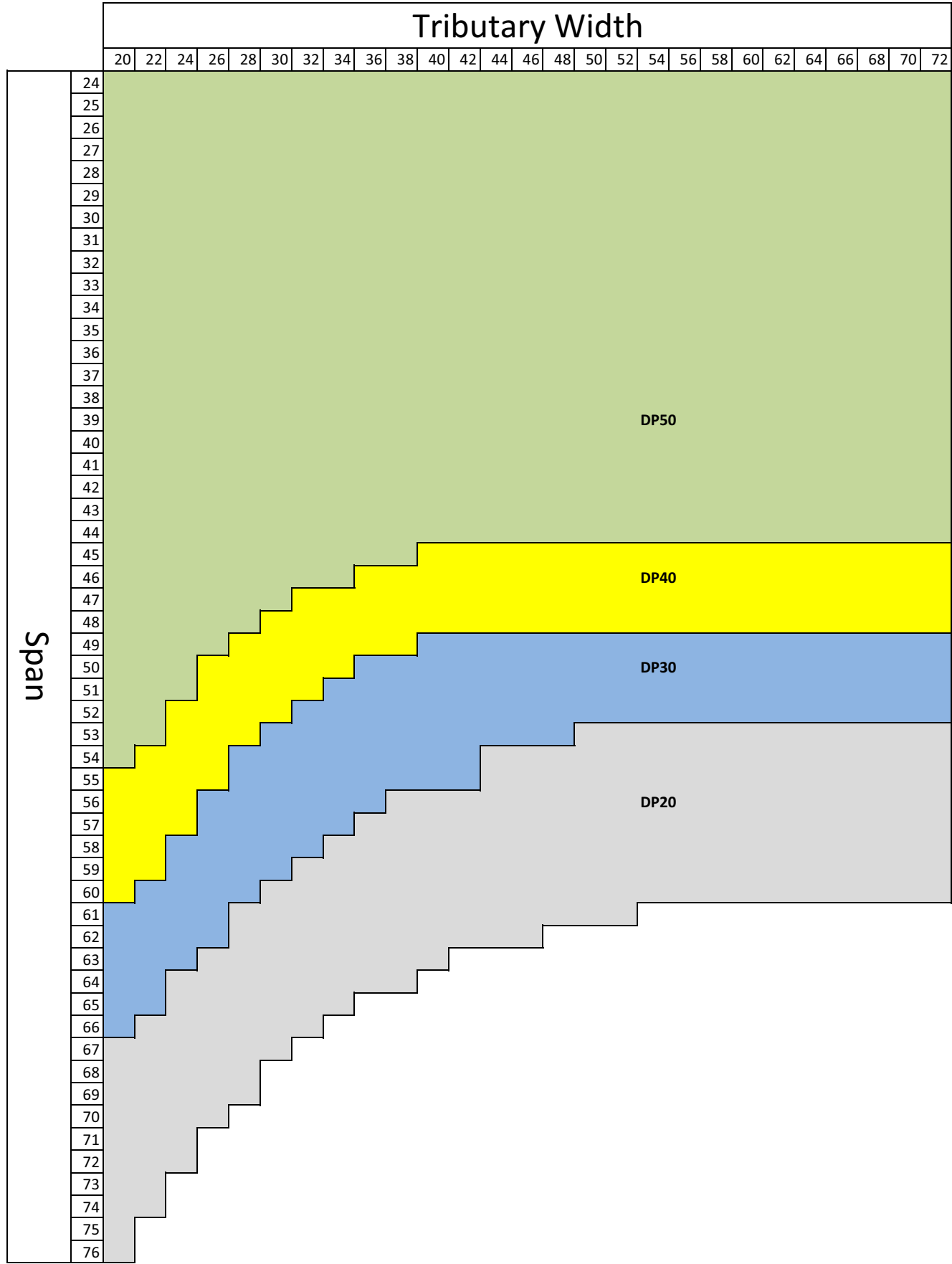
Ultimate Casement Narrow Frame Mulling - 2" LVL (Ribbon or Stacked Assembly)



Ultimate Casement Narrow Frame Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)

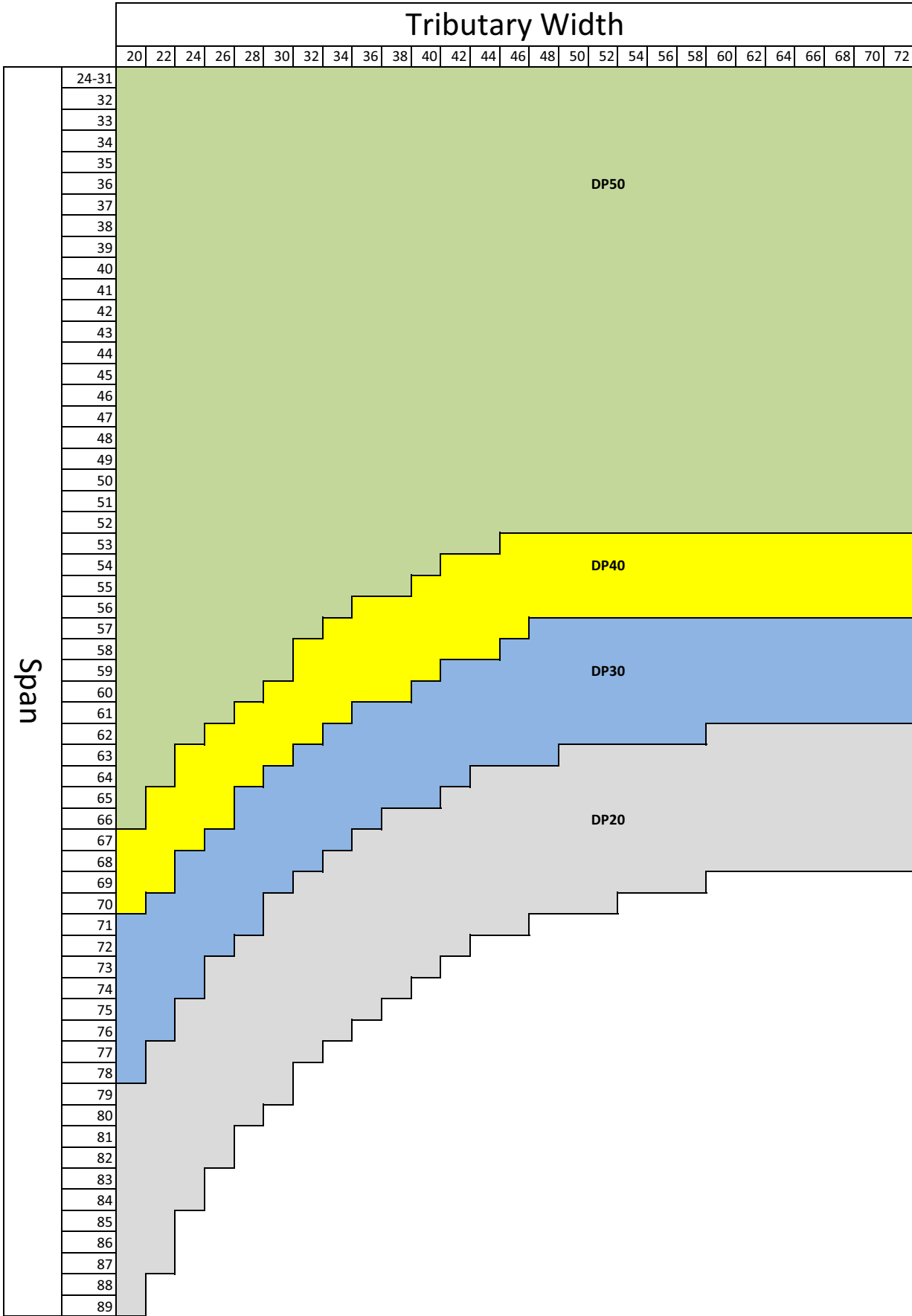


Ultimate Casement Narrow Frame Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)

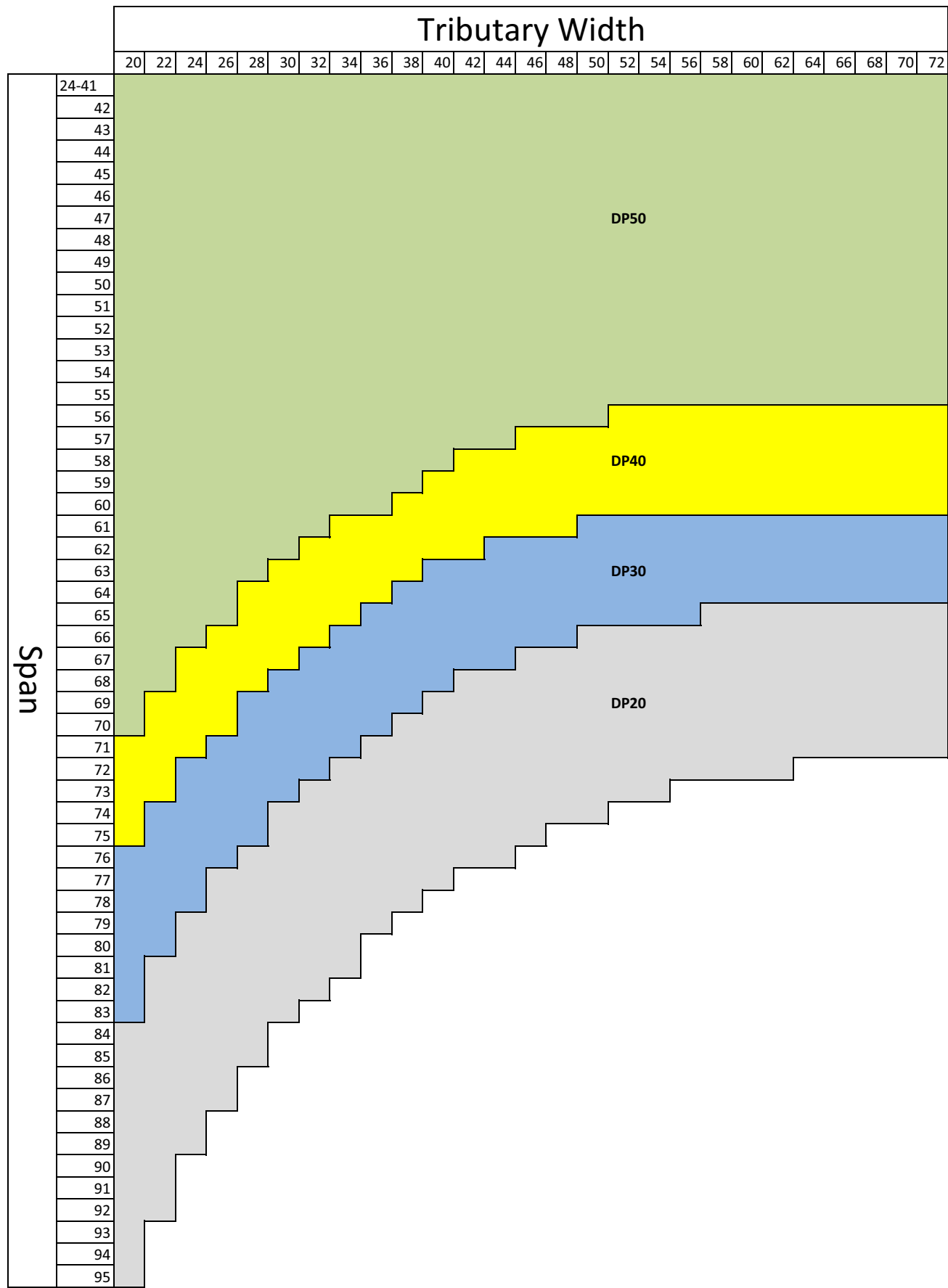


		Tributary Width																										
		20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
Span	24-31	DP50																										
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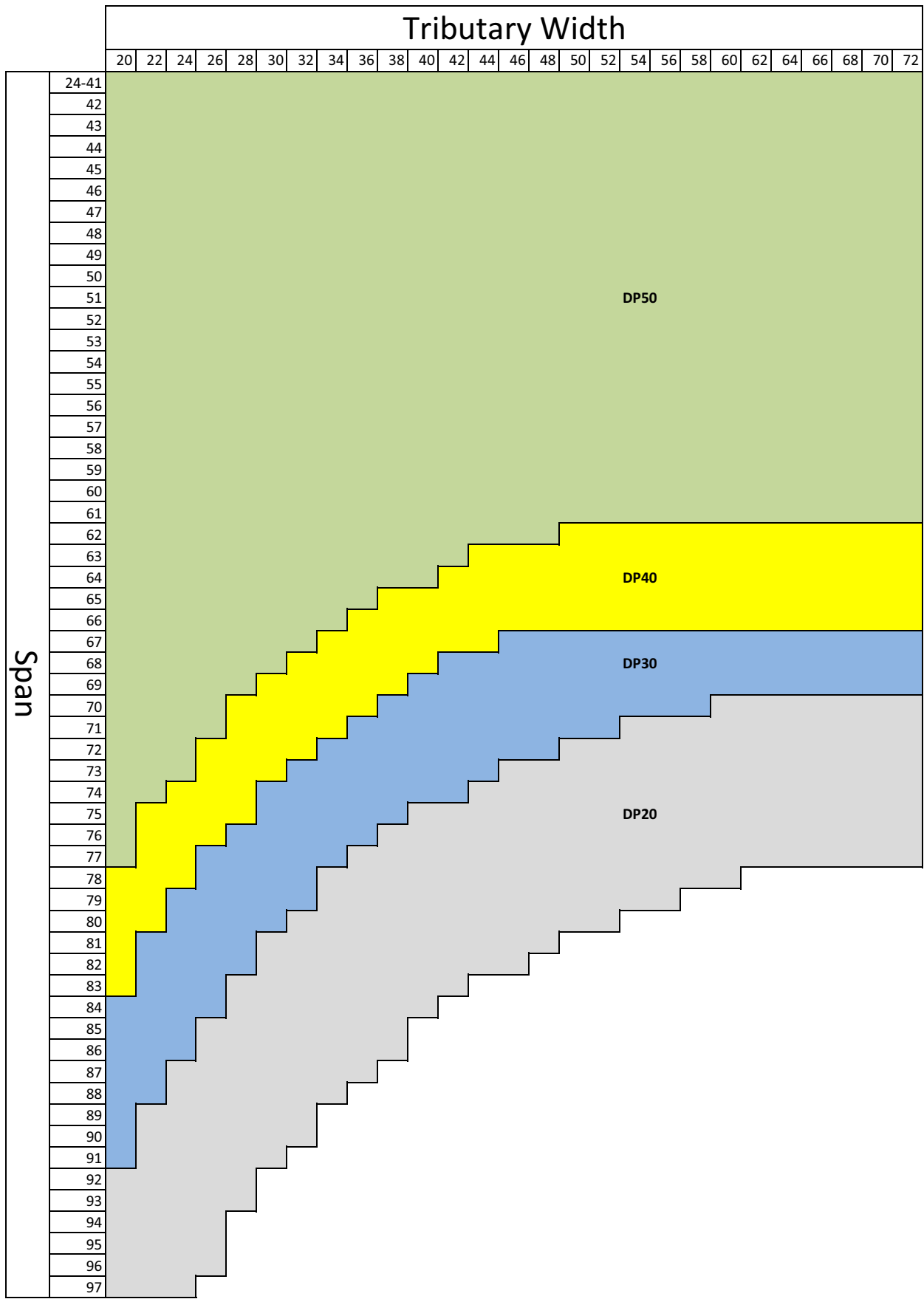
Ultimate Casement Narrow Frame Mulling - 3" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Casement Narrow Frame Mulling - 4" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Casement Narrow Frame Mulling - 6" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Direct Glaze product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Ultimate Direct Glaze
- Ultimate Direct Glaze IZ3

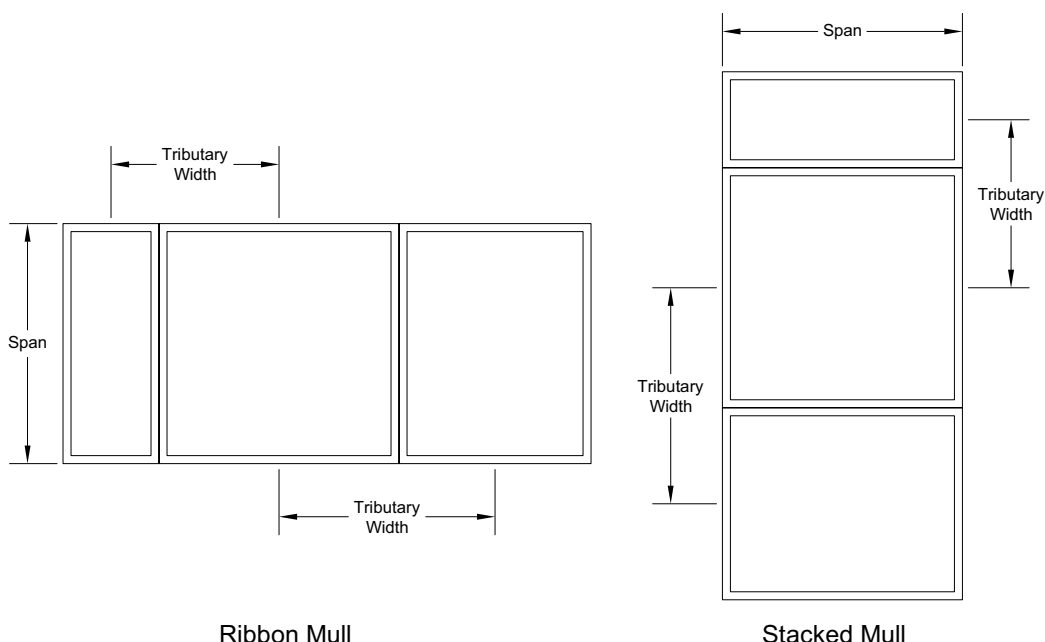
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

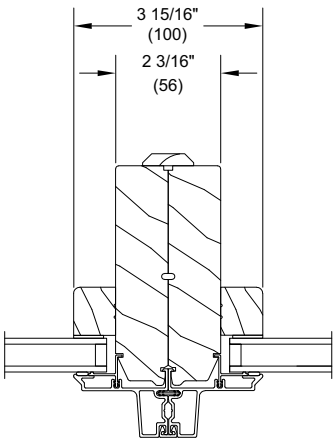
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

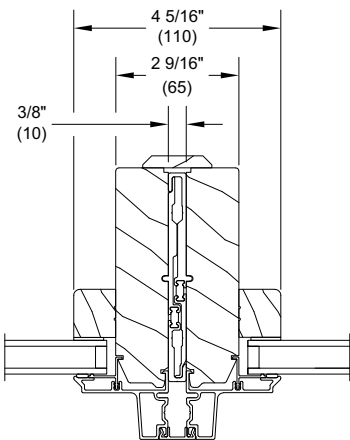
Span - The length of the mullion.



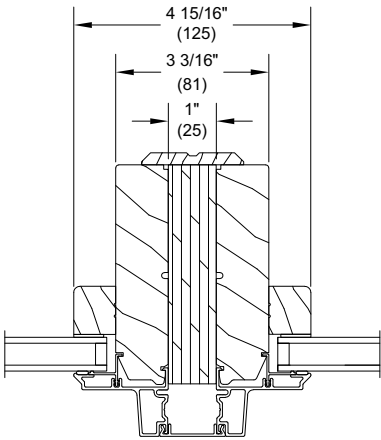
Section Details: Ultimate Direct Glaze Mulling Types



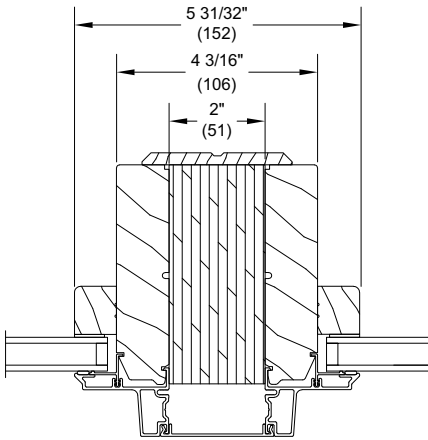
Standard



3/8" Mull Reinforcement

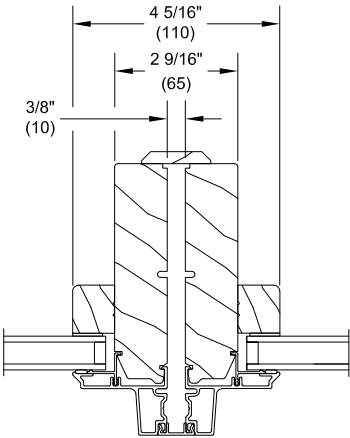


1" LVL

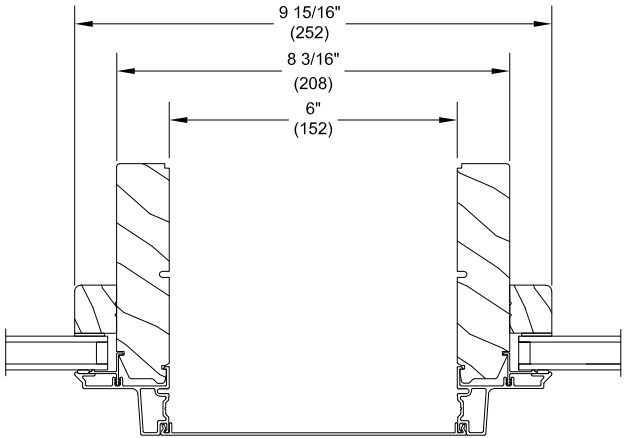


2" LVL

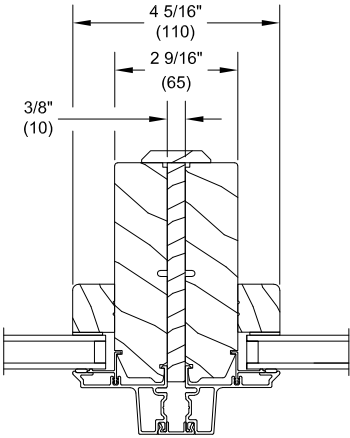
Section Details: Ultimate Direct Glaze Mulling Types (Continued)



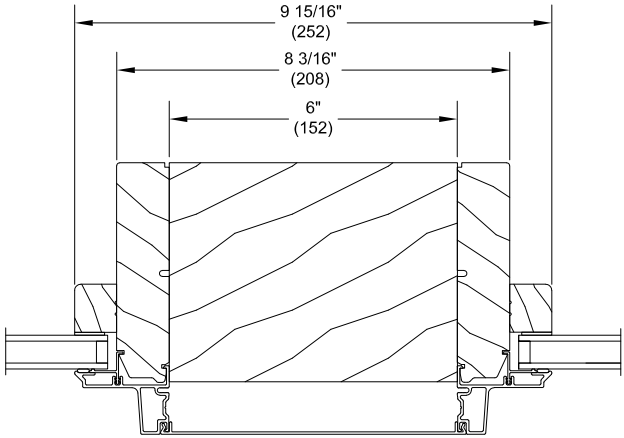
3/8" Space Mull



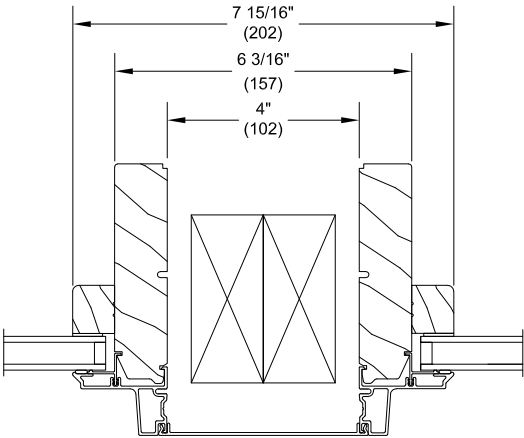
6" Space Mull



3/8" Solid Space Mull



6" Solid Space Mull

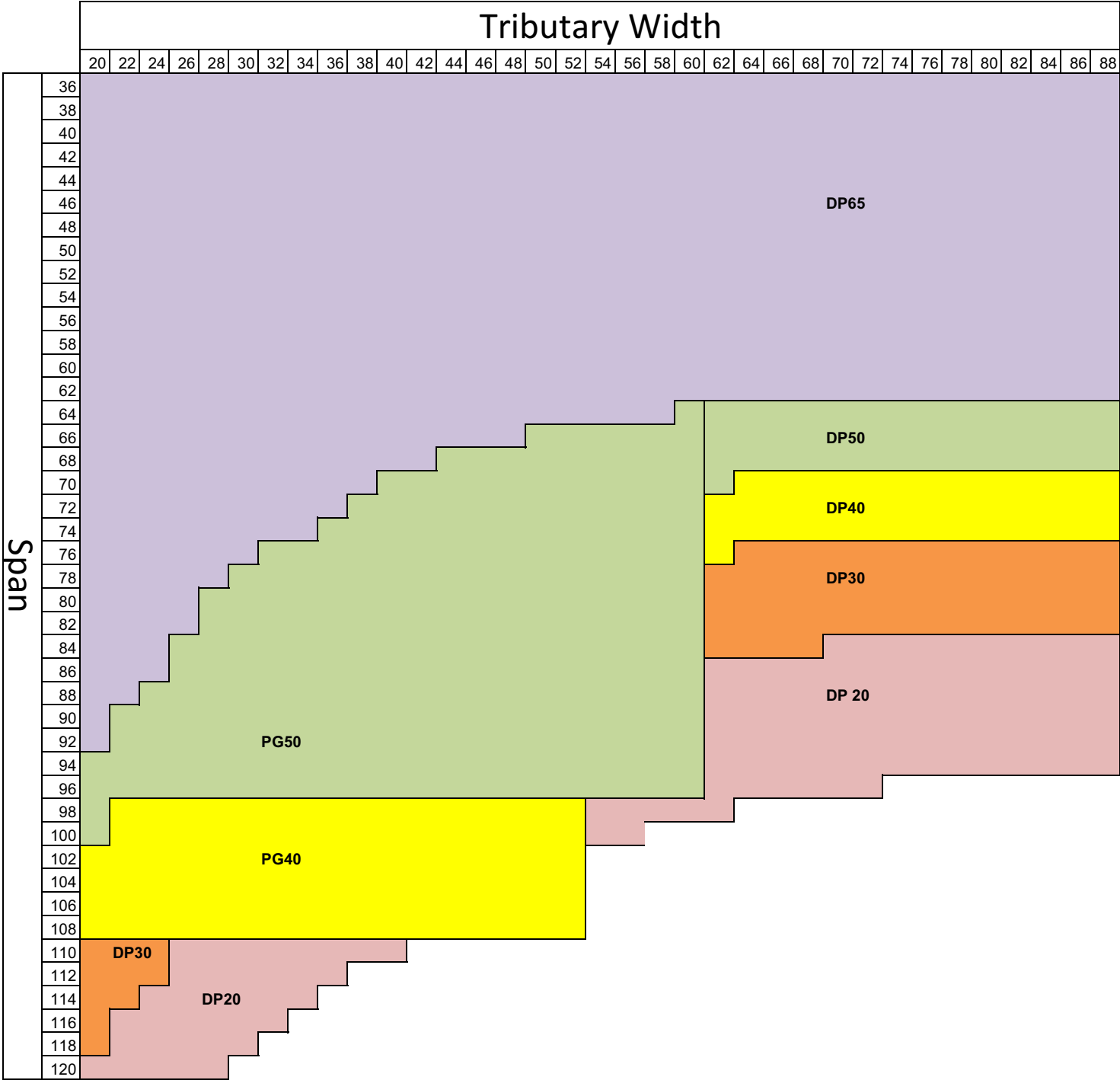


4" Stud Pocket Mull

Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

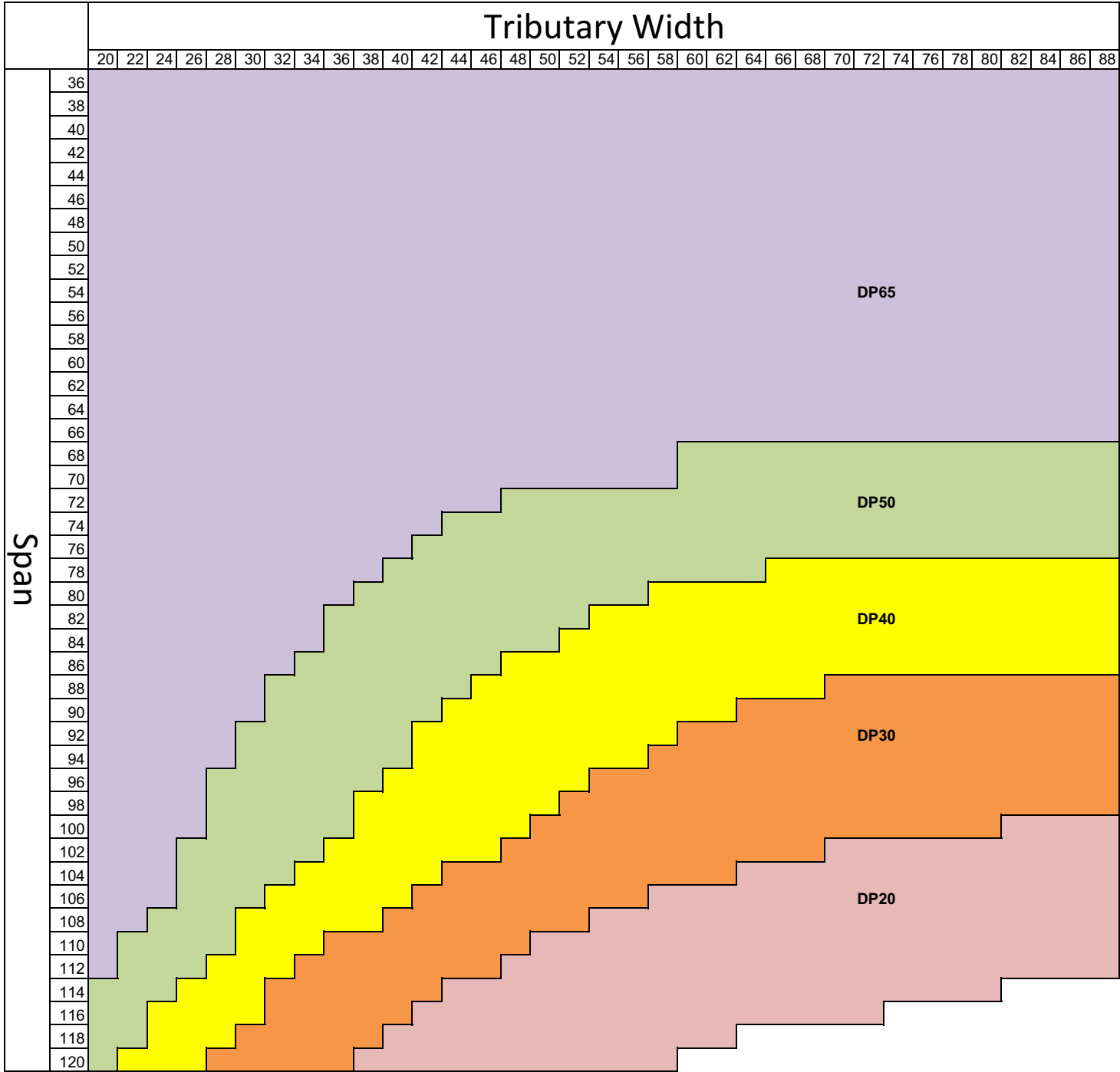
Marvin provides interior mull trim for mulls up to 2".

Ultimate Direct Glaze Mulling - Standard Frame (Ribbon or Stacked Assembly)



The chart illustrates the relationship between Span and Tributary Width for different design points (DP20, DP30, DP40, DP50, DP65). The span ranges from 36 to 120, and the tributary width ranges from 20 to 88. The design points are labeled in the chart area: DP65 (purple), DP50 (green), DP40 (yellow), DP30 (orange), and DP20 (pink).

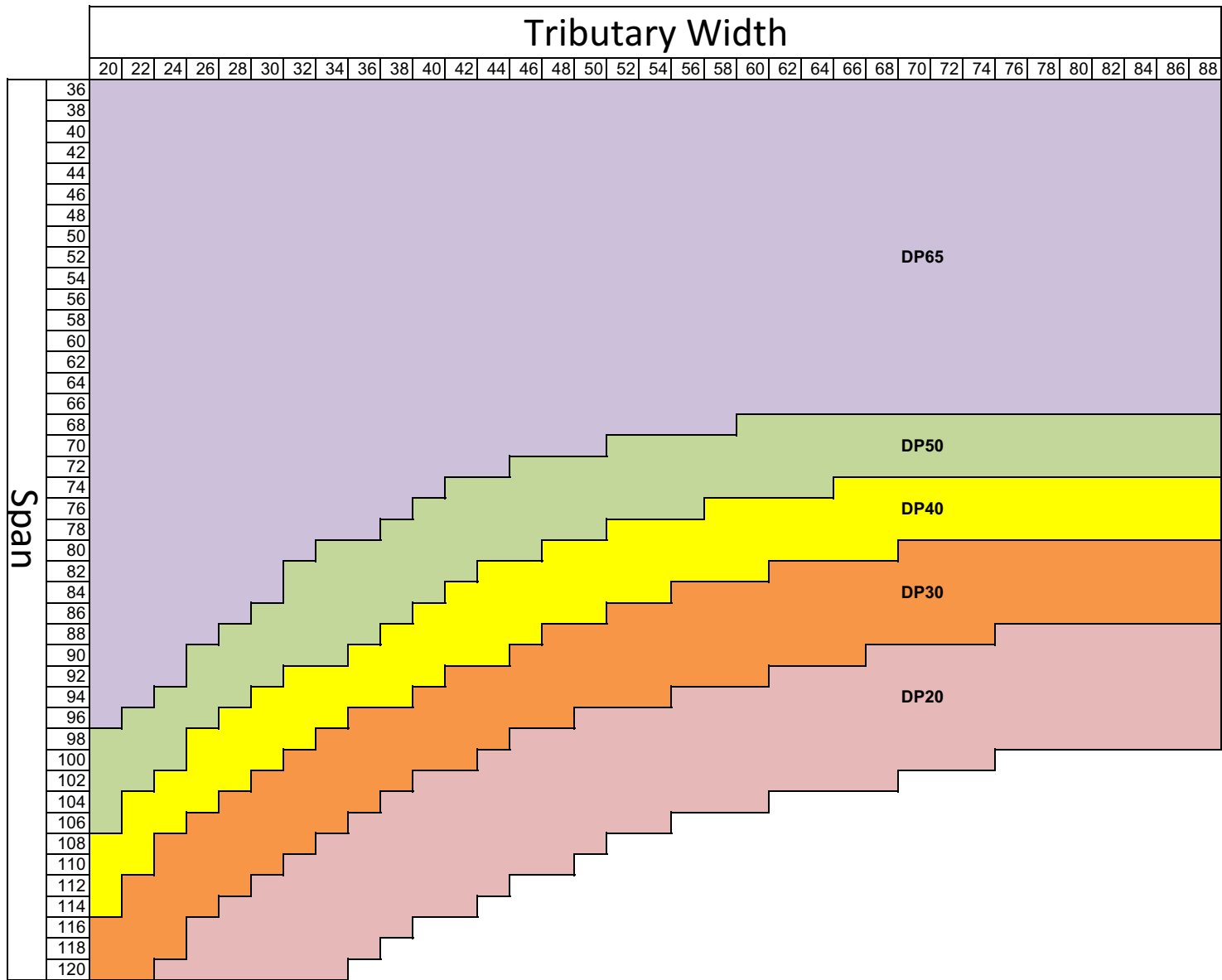
Ultimate Direct Glaze Mulling - 1" LVL (Ribbon or Stacked Assembly)



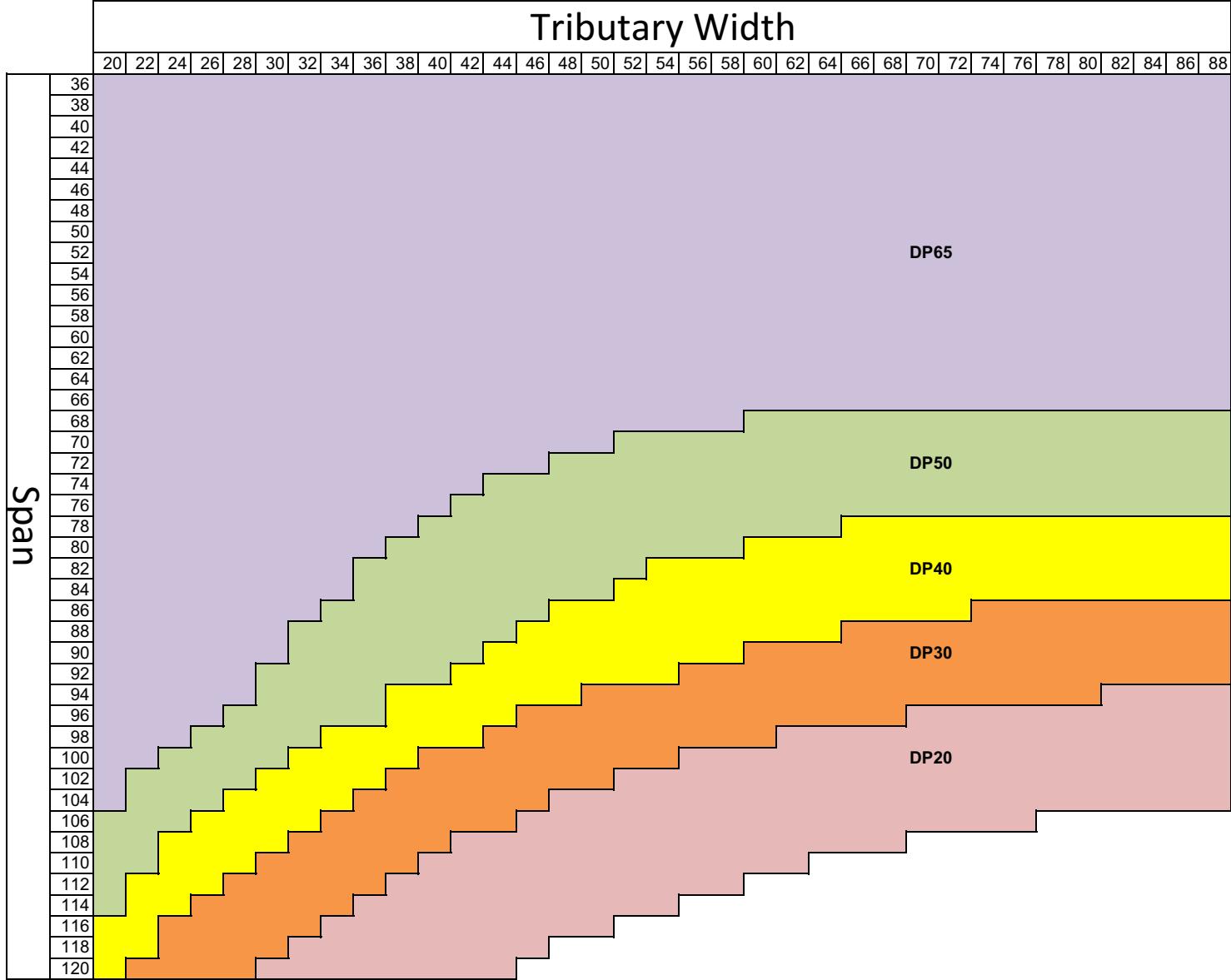
The chart illustrates the relationship between Tributary Width (X-axis) and Span (Y-axis) for different design points (DP20, DP30, DP40, DP50, DP65). The X-axis ranges from 20 to 88, and the Y-axis ranges from 36 to 120. The design points are labeled in the corresponding colored regions: DP65 (purple), DP50 (green), DP40 (yellow), DP30 (orange), and DP20 (pink).

Span	Tributary Width Range	Design Point
36 - 108	20 - 60	DP65
36 - 108	60 - 88	DP50
108 - 112	20 - 60	DP50
108 - 112	60 - 88	DP40
112 - 116	20 - 60	DP40
112 - 116	60 - 88	DP30
116 - 120	20 - 60	DP30
116 - 120	60 - 88	DP20

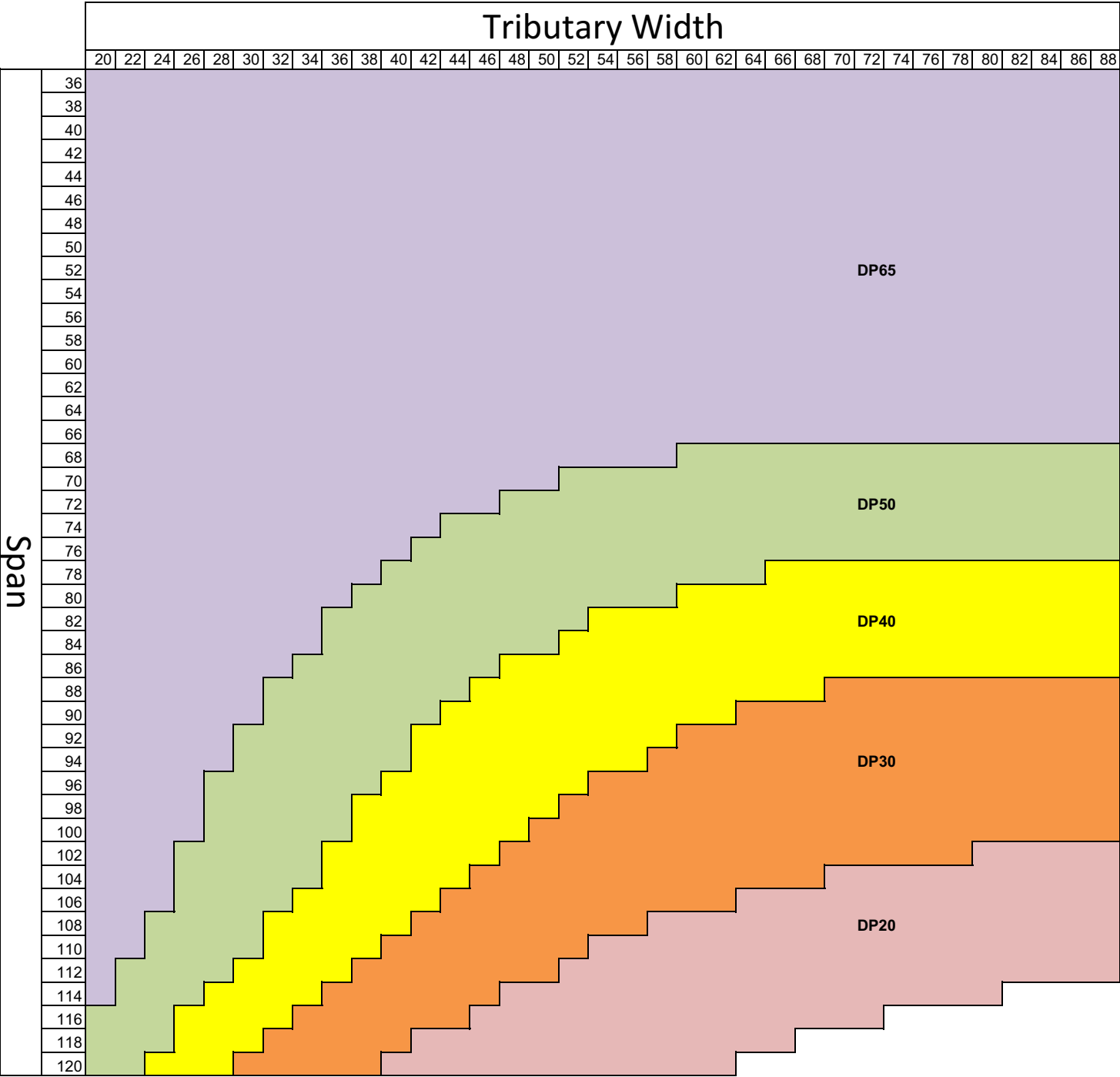
Ultimate Direct Glaze Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)



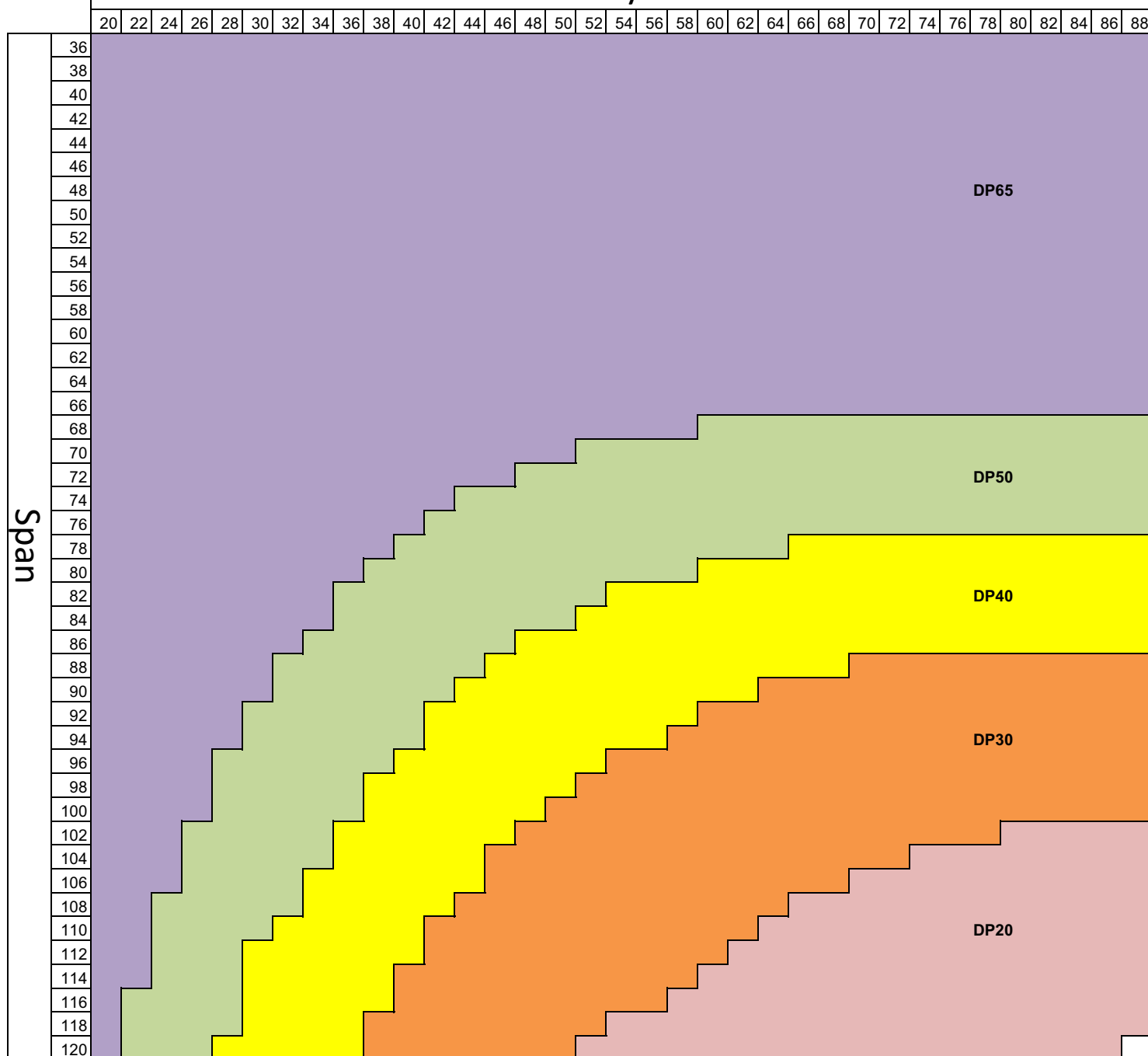
Ultimate Direct Glaze Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Mulling - 2" Solid Space Mull (Ribbon or Stacked Assembly)



Tributary Width



The chart illustrates the relationship between Span and Tributary Width for different DP values. The Y-axis represents Span (36 to 120) and the X-axis represents Tributary Width (20 to 88). The chart is divided into five colored regions, each representing a different DP value:

- DP65 (Purple):** The top region, spanning from Span 36 to 68.
- DP50 (Green):** The second region, spanning from Span 68 to 78.
- DP40 (Yellow):** The third region, spanning from Span 78 to 90.
- DP30 (Orange):** The fourth region, spanning from Span 90 to 106.
- DP20 (Pink):** The bottom region, spanning from Span 106 to 120.

The boundaries between these regions are defined by a step function that increases as Span increases. The labels DP65, DP50, DP40, DP30, and DP20 are placed within their respective regions.

Ultimate Direct Glaze Round Top Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Direct Glaze Round Top product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Ultimate Direct Glaze Round Top
- Ultimate Direct Glaze Polygon 4/4
- Ultimate Direct Glaze Round Top IZ3

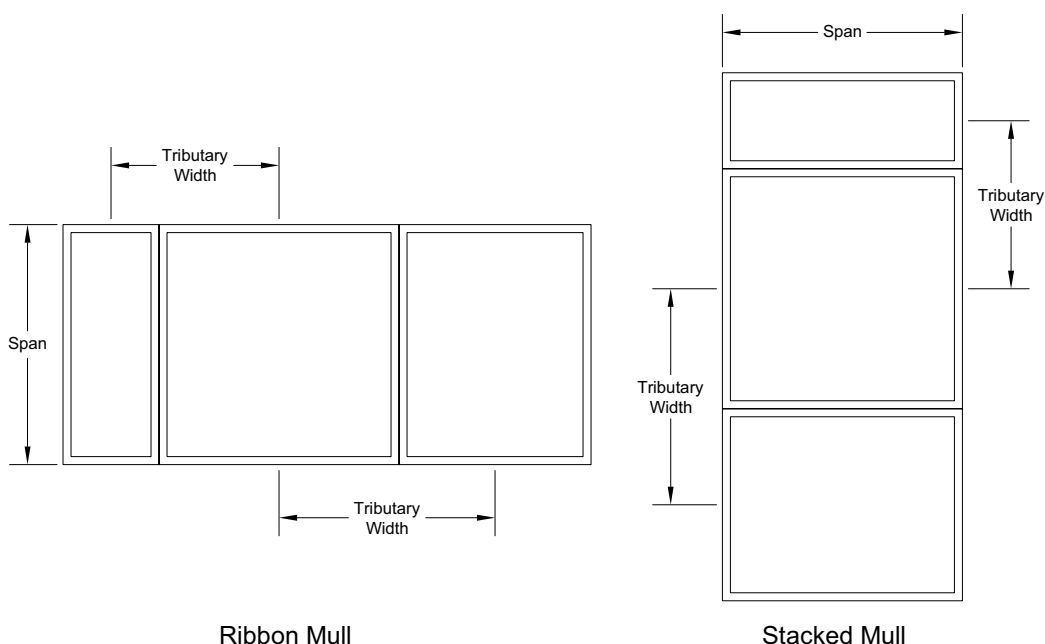
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

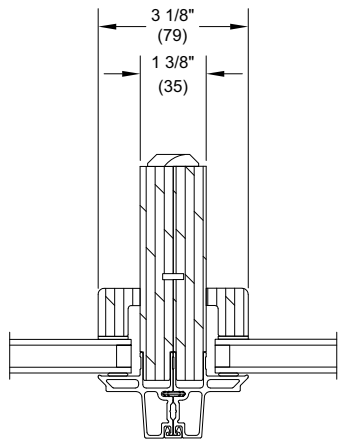
Tributary and Span

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

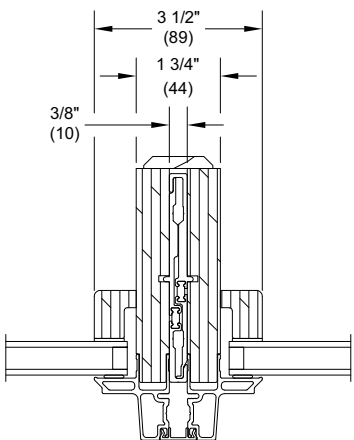
Span - The length of the mullion.



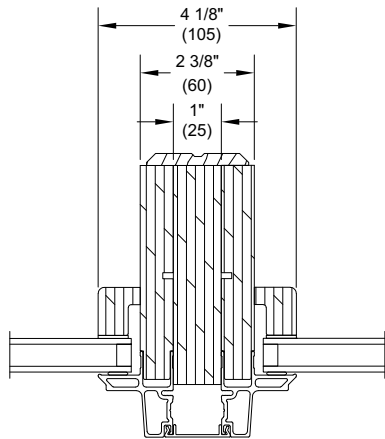
Section Details: Ultimate Direct Glaze Round Top Mulling Types



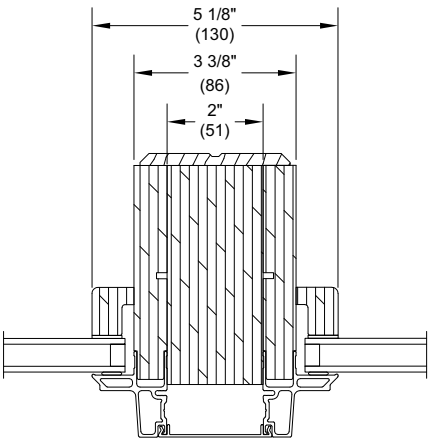
Standard



3/8" Mull Reinforcement

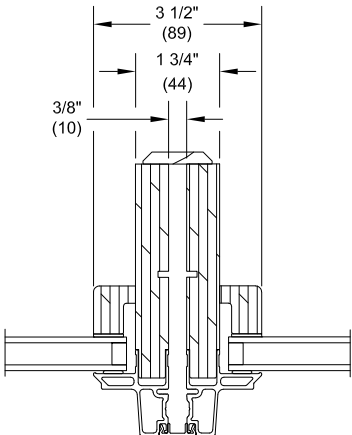


1" LVL

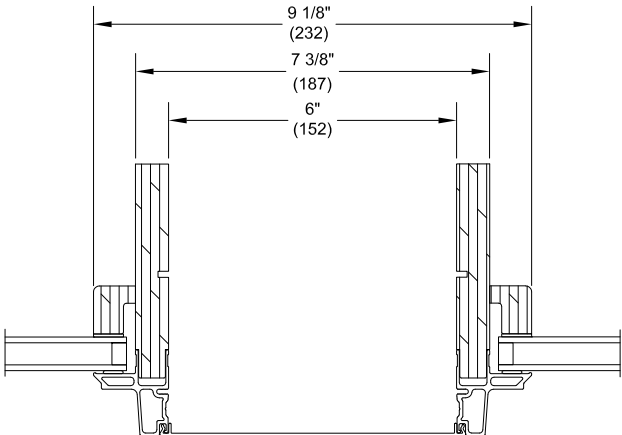


2" LVL

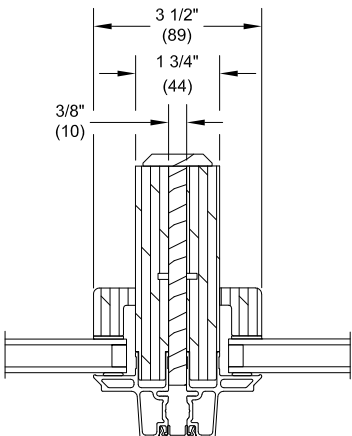
Section Details: Ultimate Direct Glaze Round Top Mulling Types (Continued)



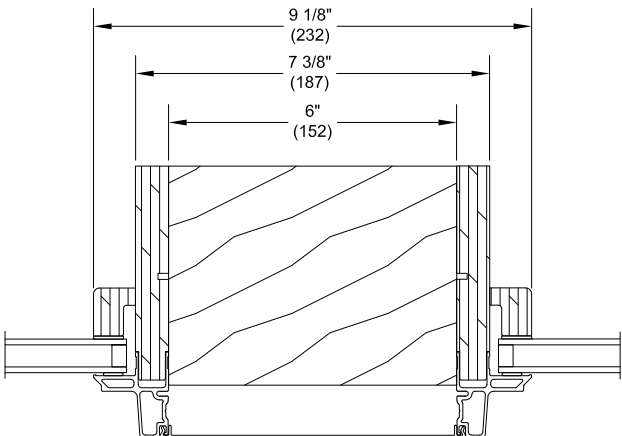
3/8" Space Mull



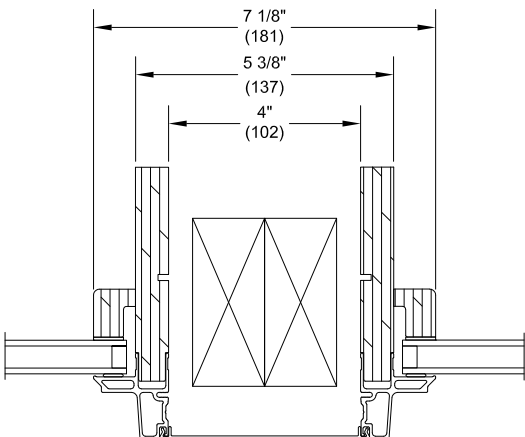
6" Space Mull



3/8" Solid Space Mull



6" Solid Space Mull

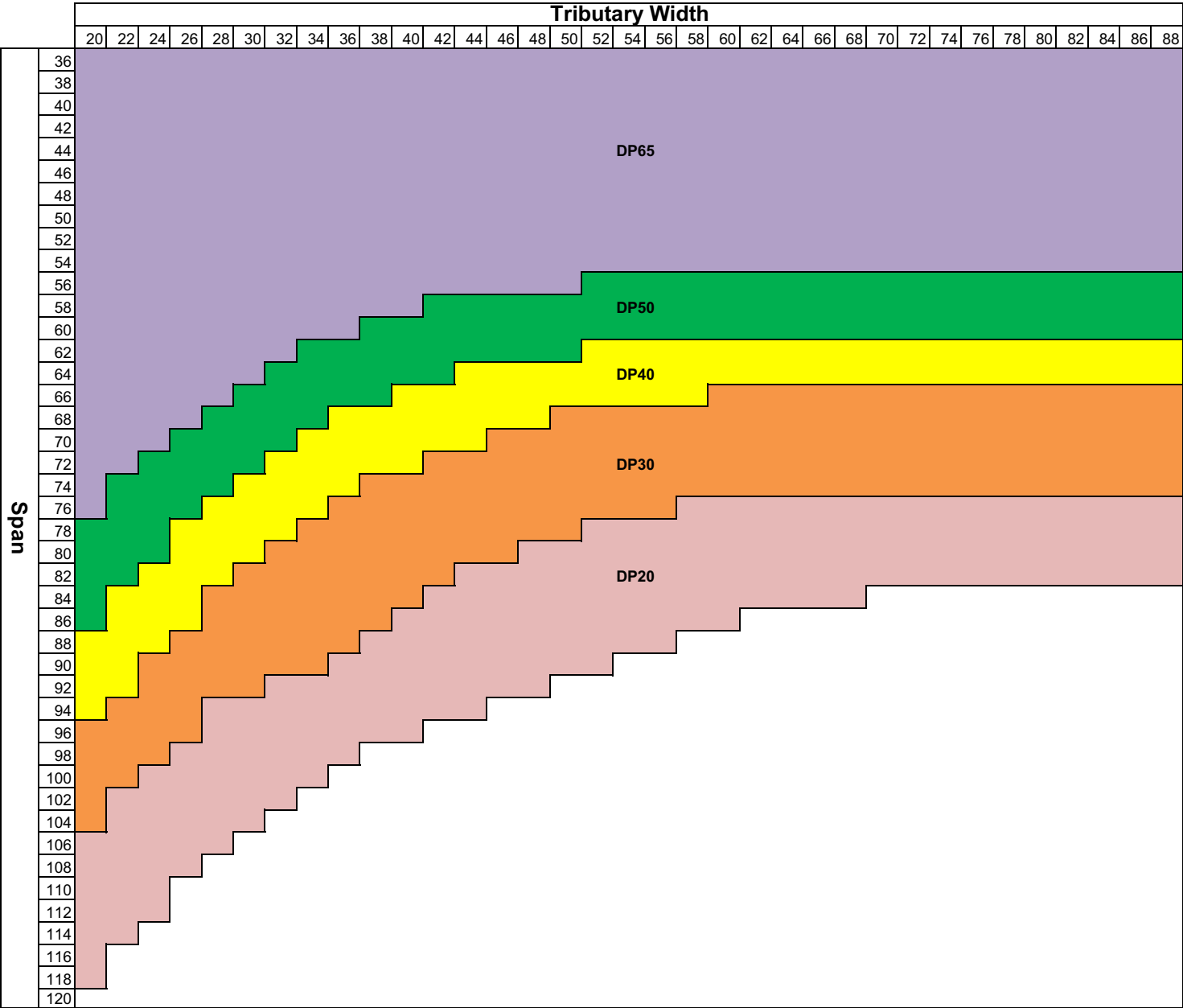


4" Stud Pocket Mull

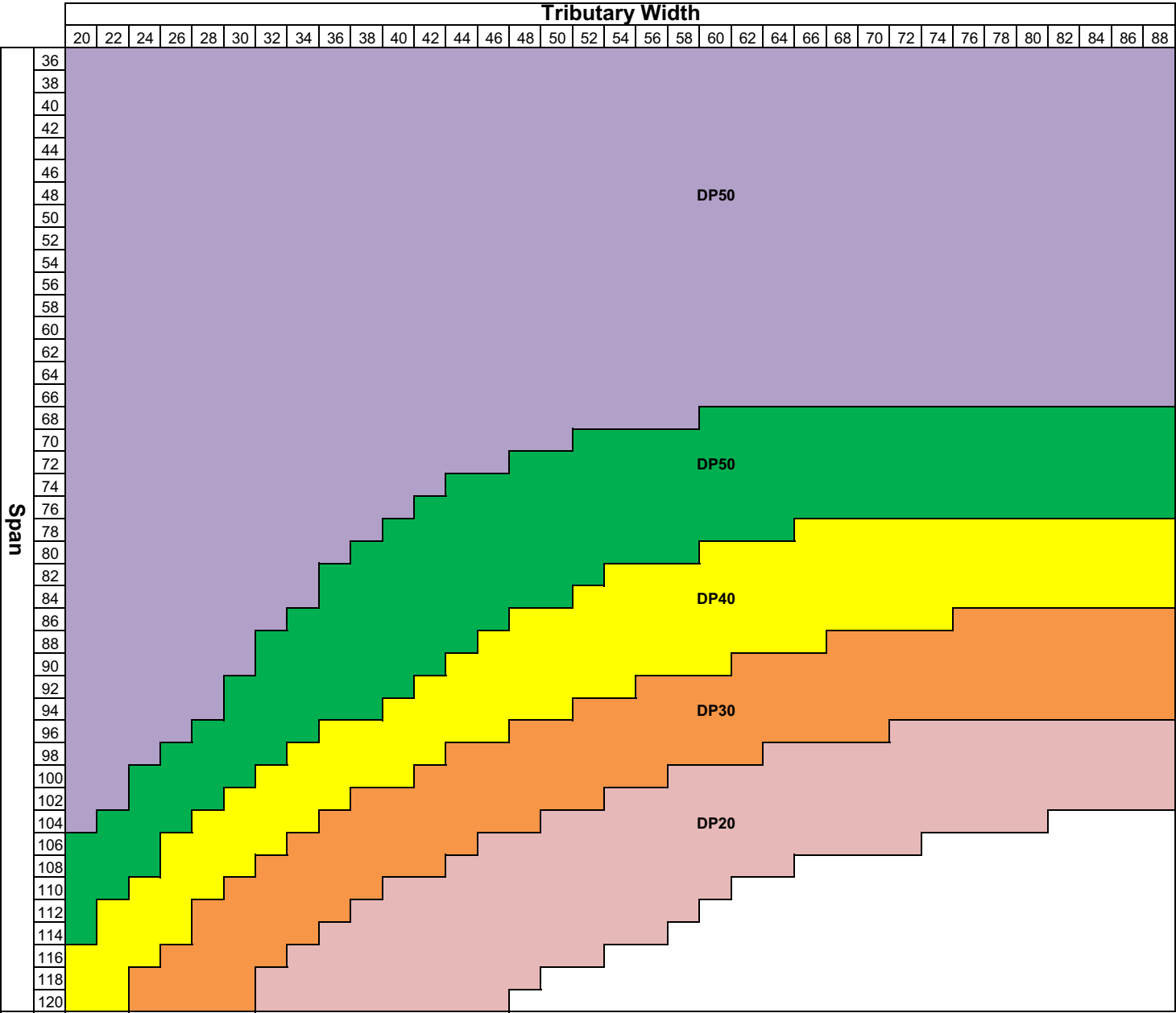
Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

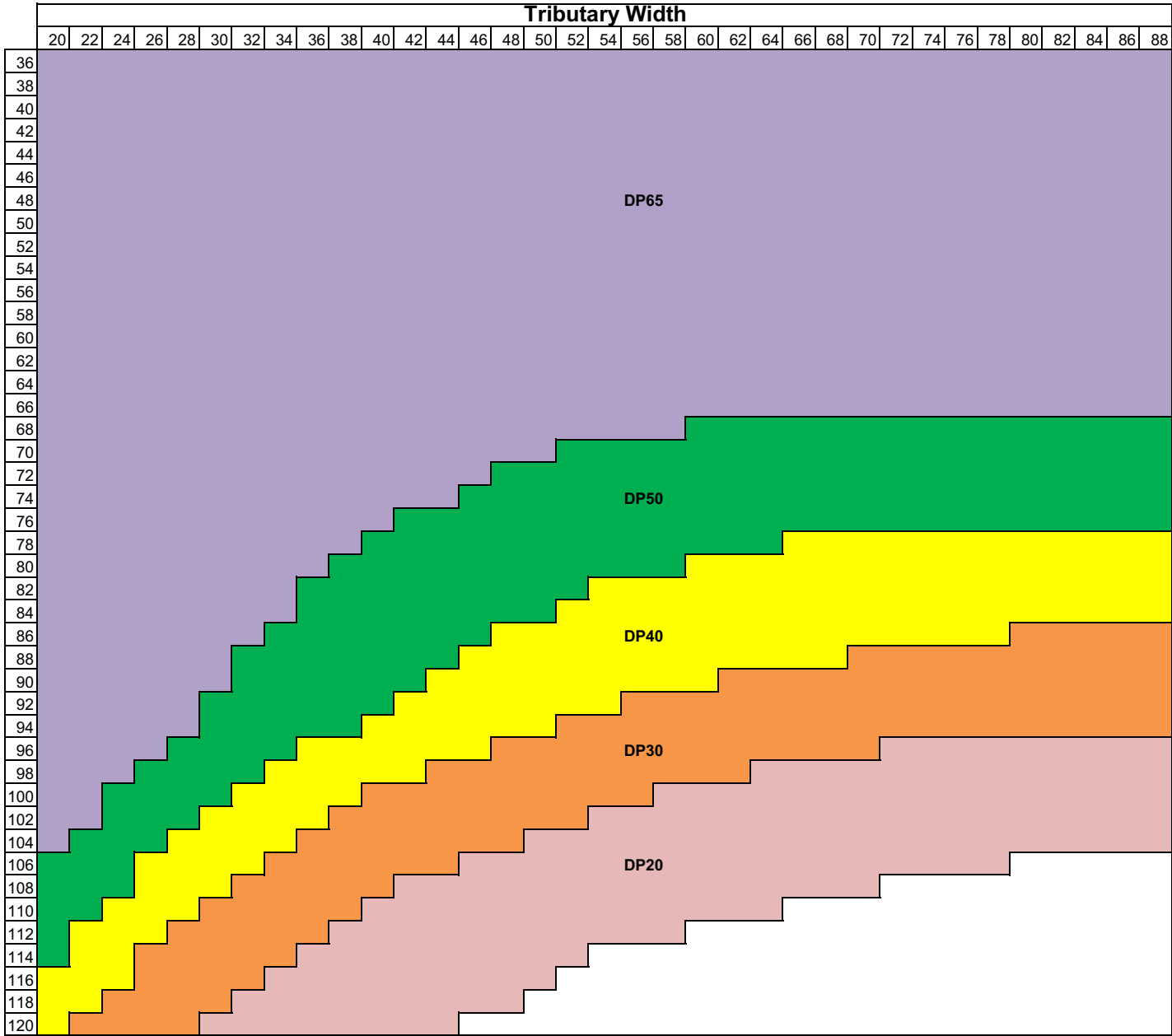
Ultimate Direct Glaze Round Top Mulling - Standard Frame (Ribbon or Stacked Assembly)



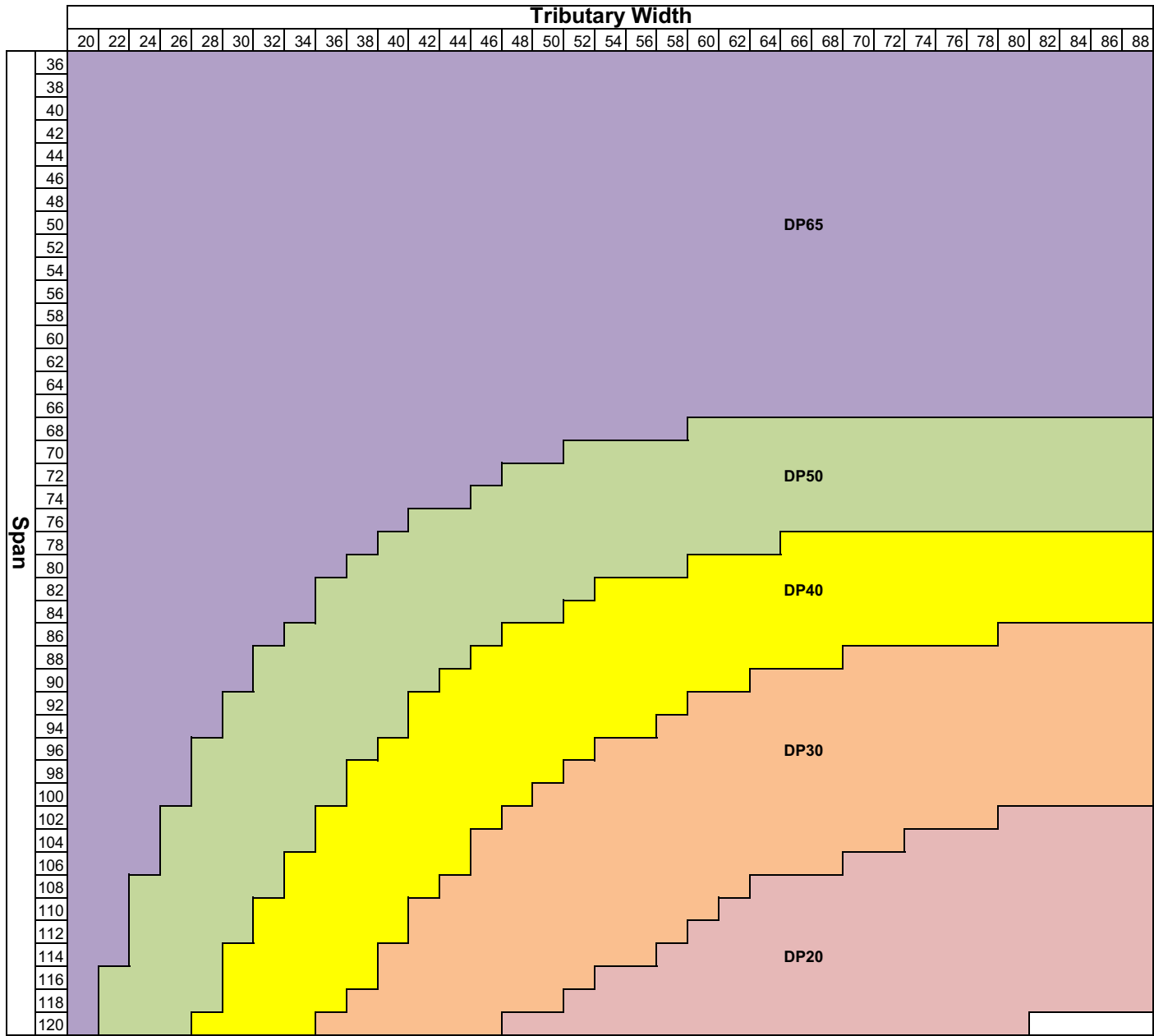
Ultimate Direct Glaze Round Top Mulling - 3/8" Mull Reinforcement (Ribbon or Stacked Assembly)



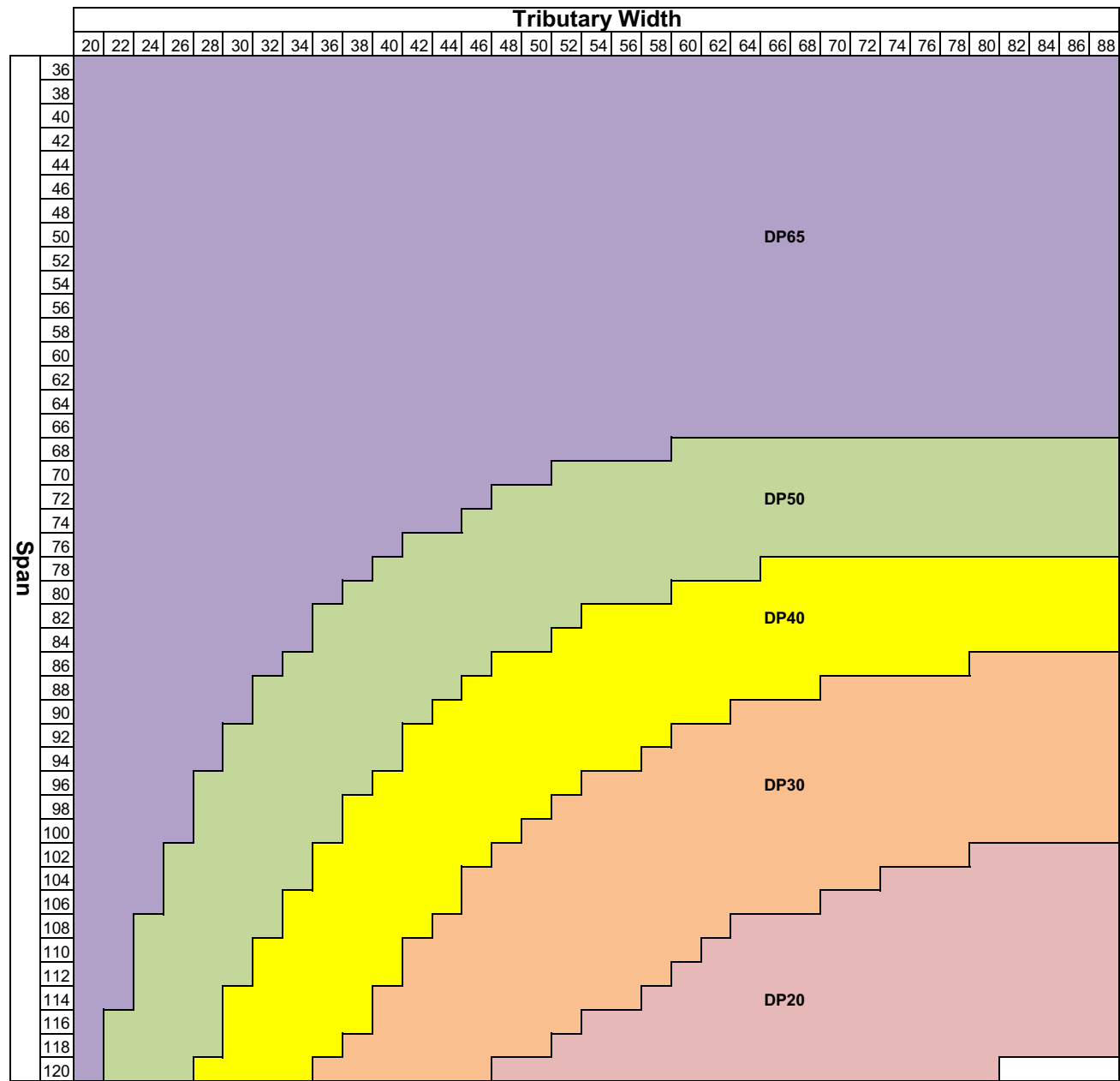
Ultimate Direct Glaze Round Top Mulling - 1" LVL (Ribbon or Stacked Assembly)



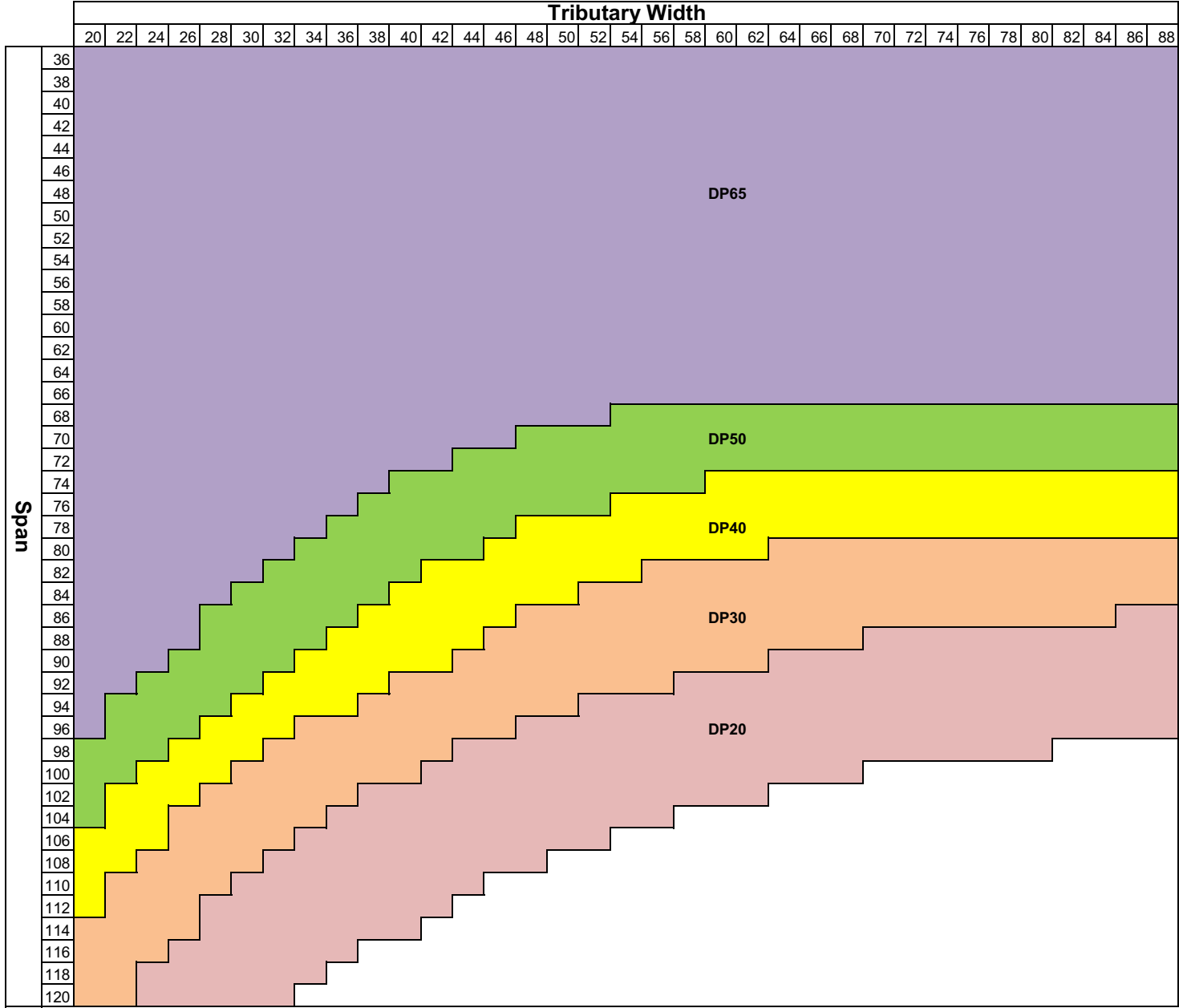
Ultimate Direct Glaze Round Top Mulling - 2" LVL (Ribbon or Stacked Assembly)



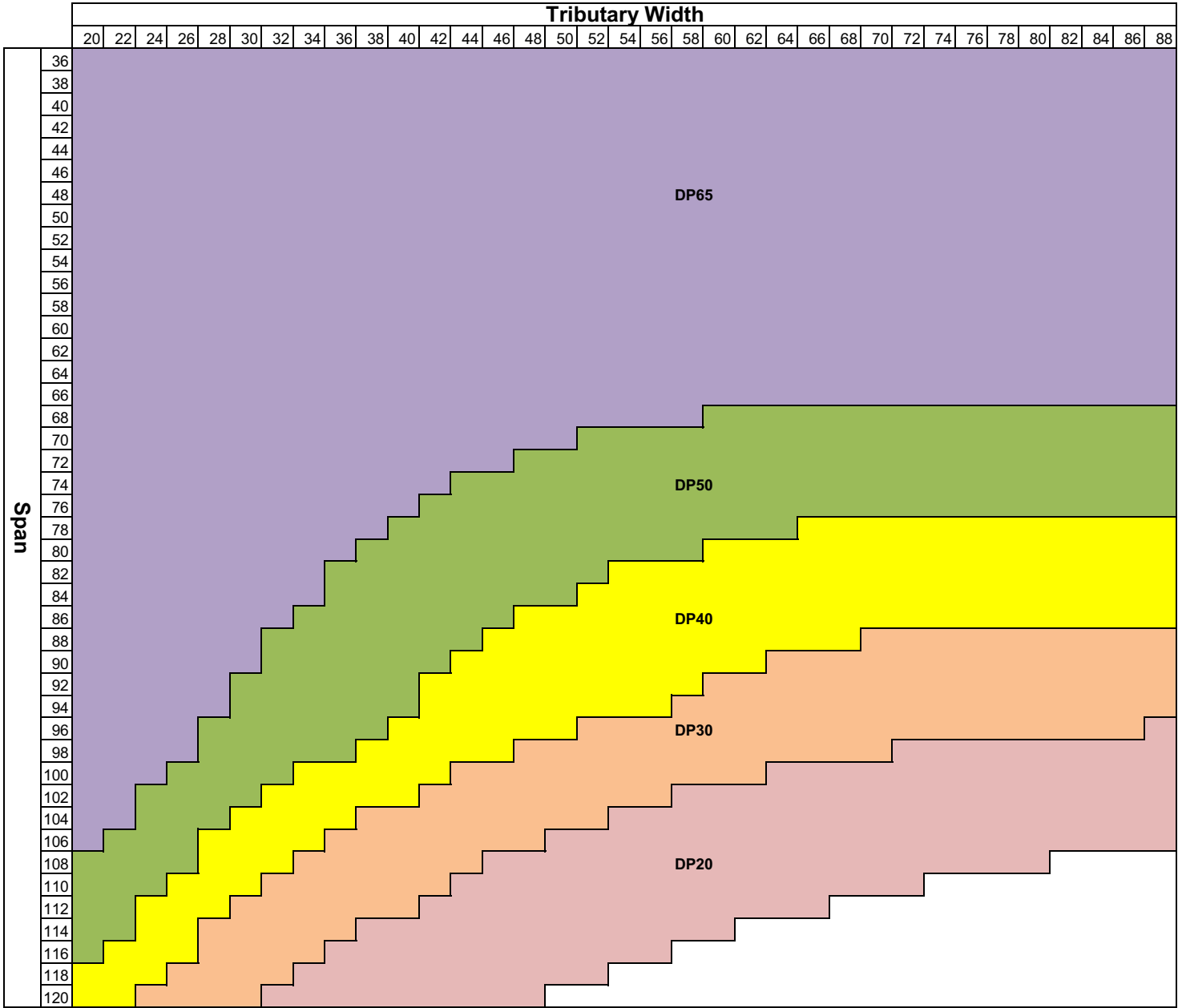
Ultimate Direct Glaze Round Top Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)



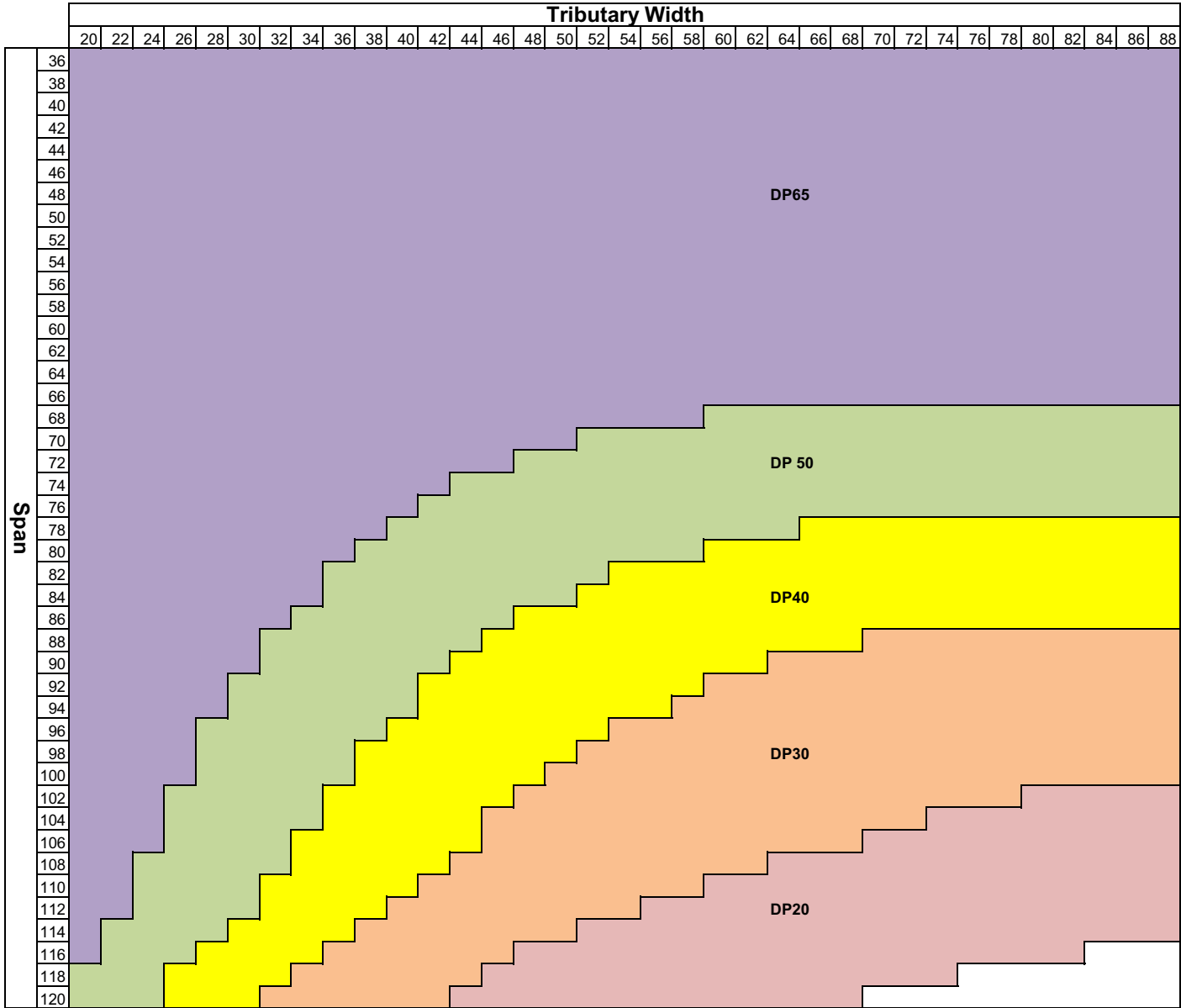
Ultimate Direct Glaze Round Top Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)



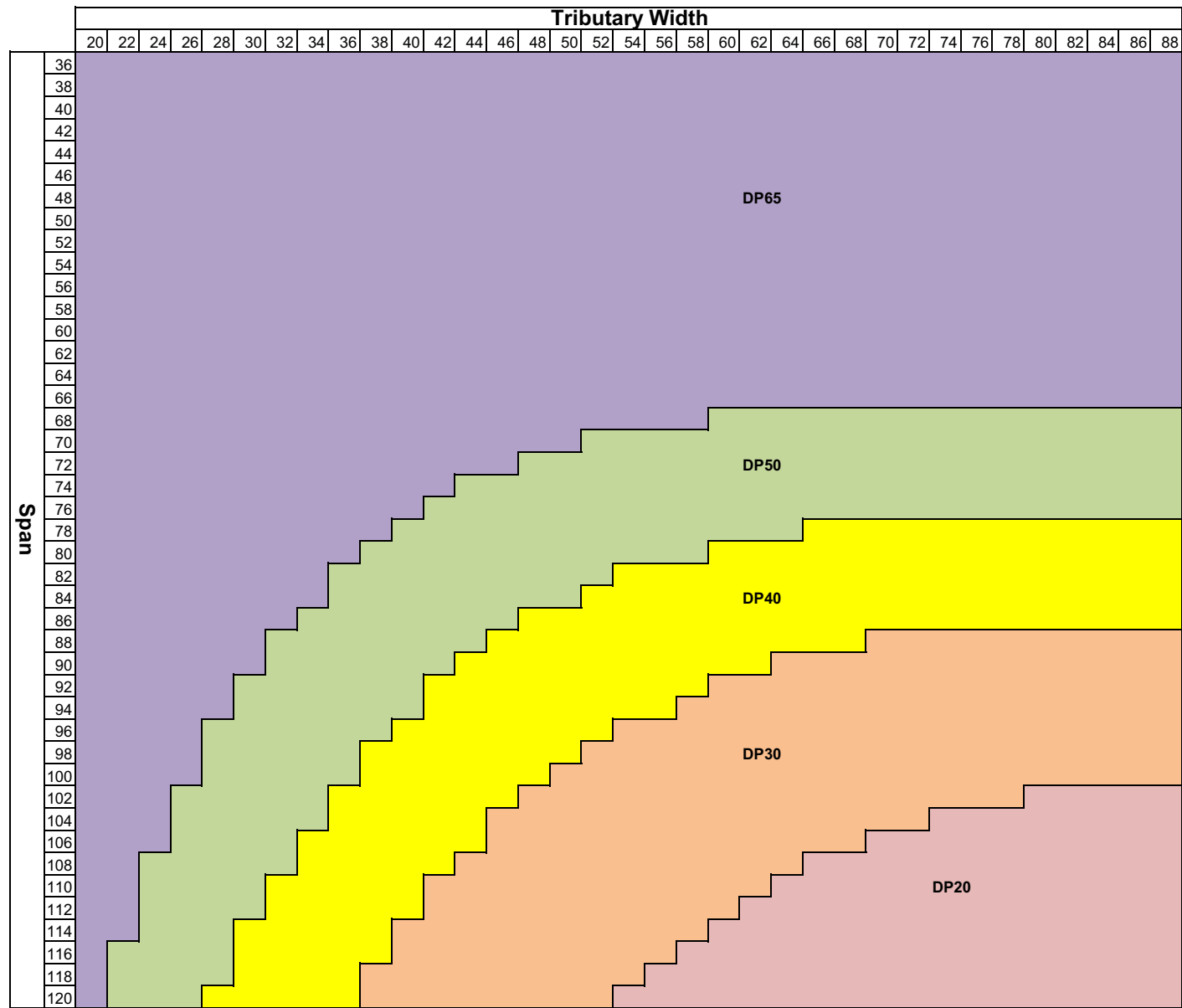
Ultimate Direct Glaze Round Top Mulling - 2" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Round Top Mulling - 3" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Round Top Mulling - 4" and 6" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Narrow Frame Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Direct Glaze Narrow Frame product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Narrow Frame (Contemporary) Direct Glaze

NOTE: Multi-High Multi-Wide Assemblies with any side that exceed 72" in either direction will be shipped with a temporary blocking around the entire perimeter of the assembly to provide support during shipping and handling.

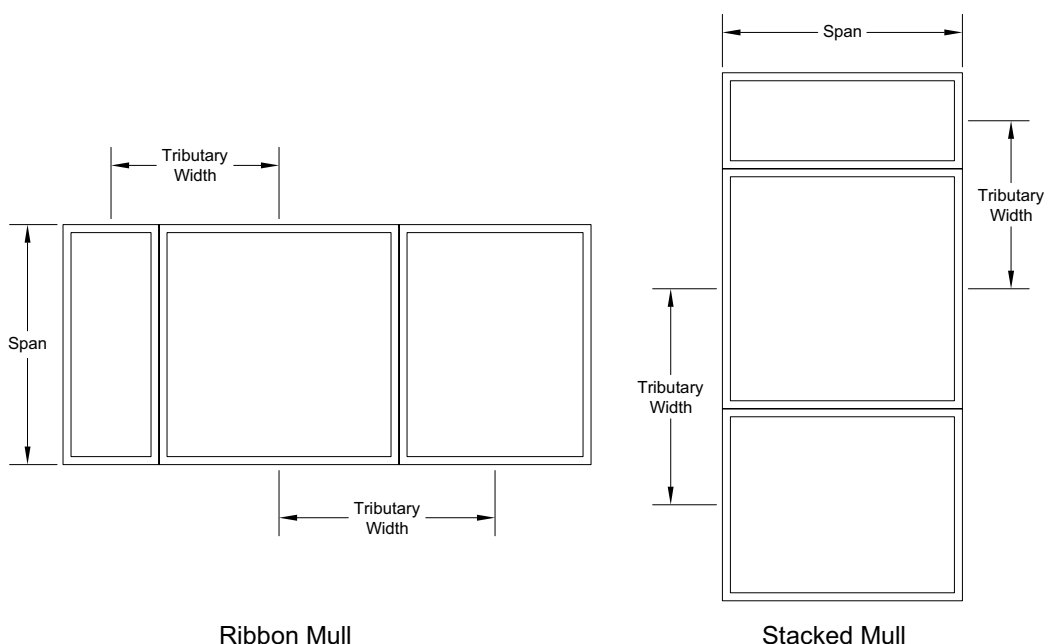
Certified Mull Installation Methods

- Jamb Screws

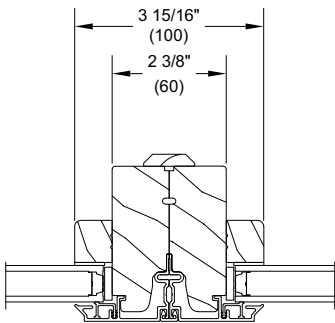
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

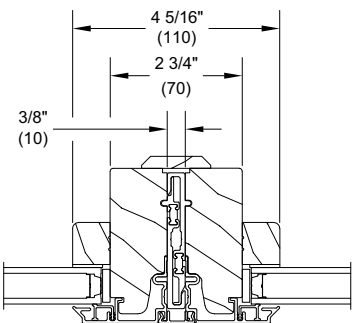
Span - The length of the mullion.



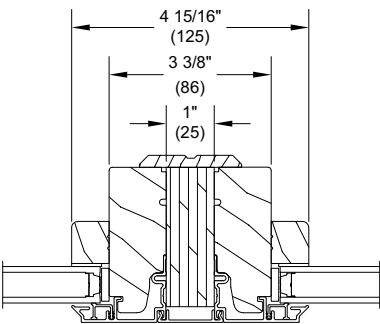
Section Details: Ultimate Direct Glaze Narrow Frame Mulling Types



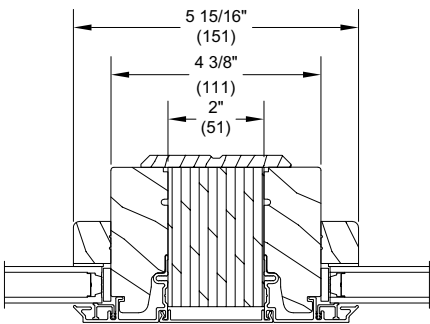
Standard



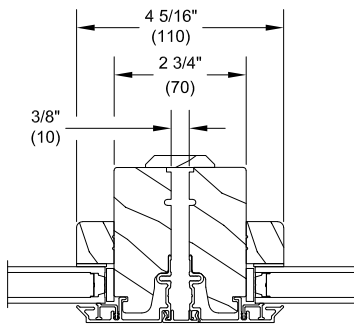
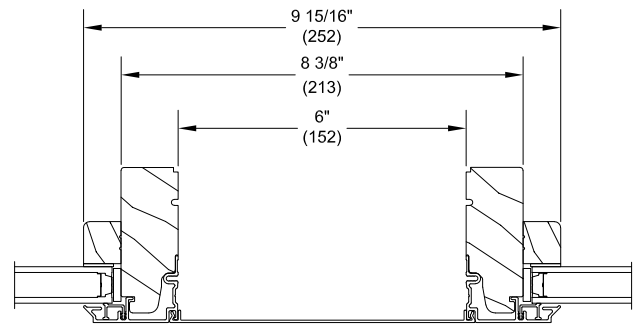
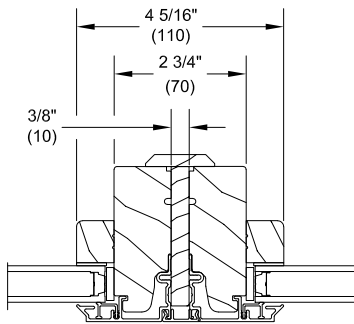
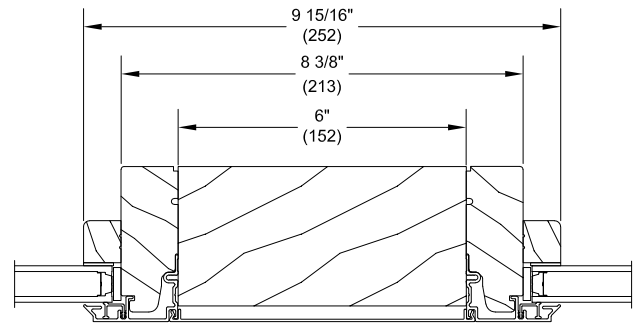
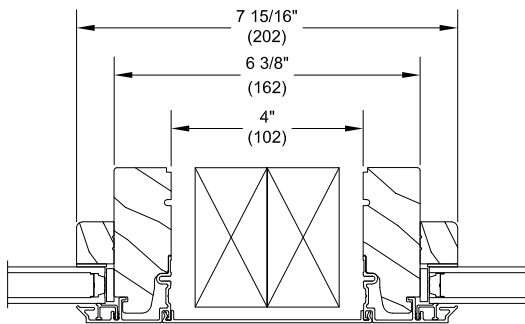
3/8" Mull Reinforcement



1" LVL



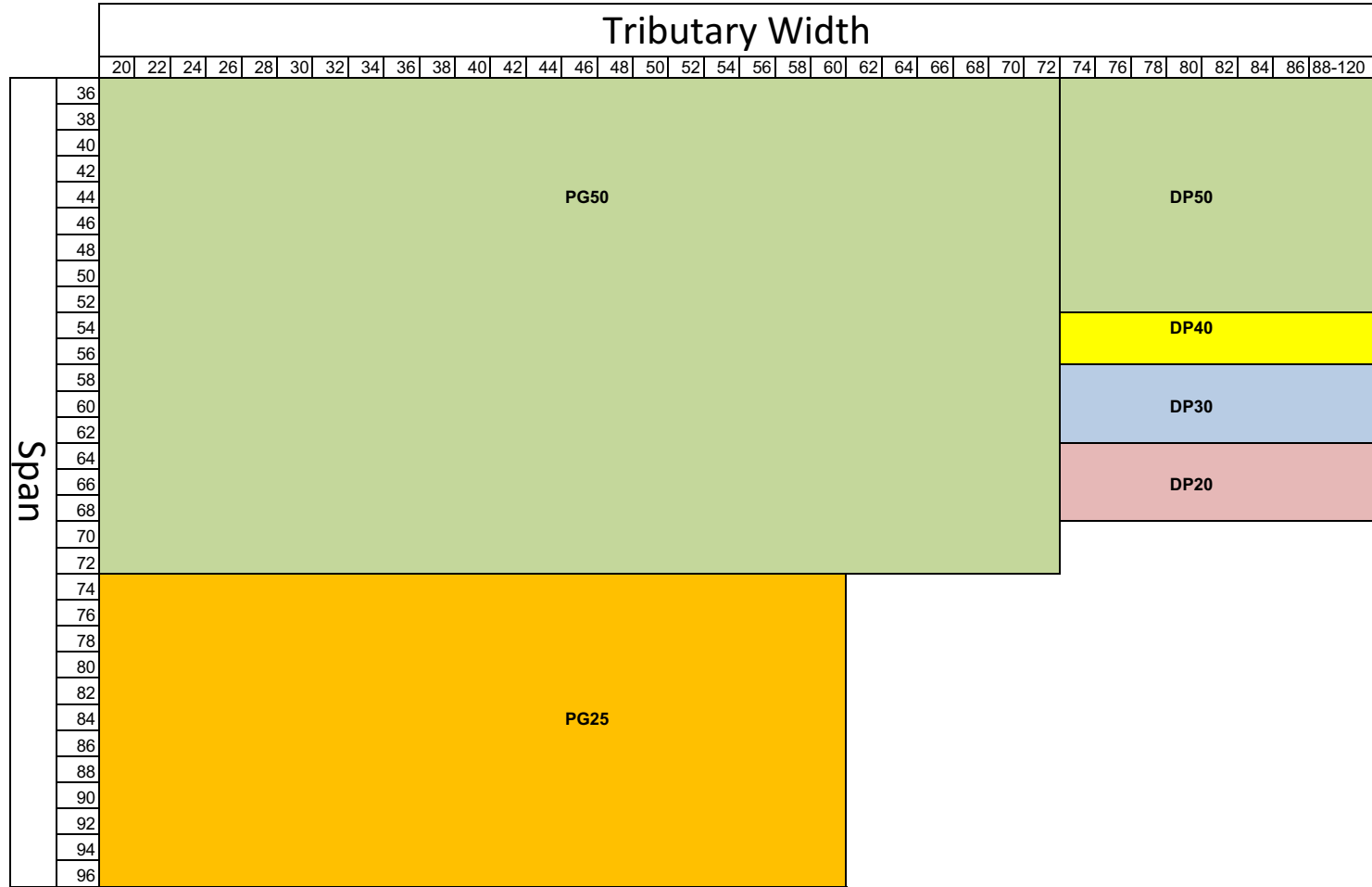
2" LVL

Section Details: Ultimate Direct Glaze Narrow Frame Mulling Types (Continued)

3/8" Space Mull

6" Space Mull

3/8" Solid Space Mull

6" Solid Space Mull

4" Stud Pocket Mull

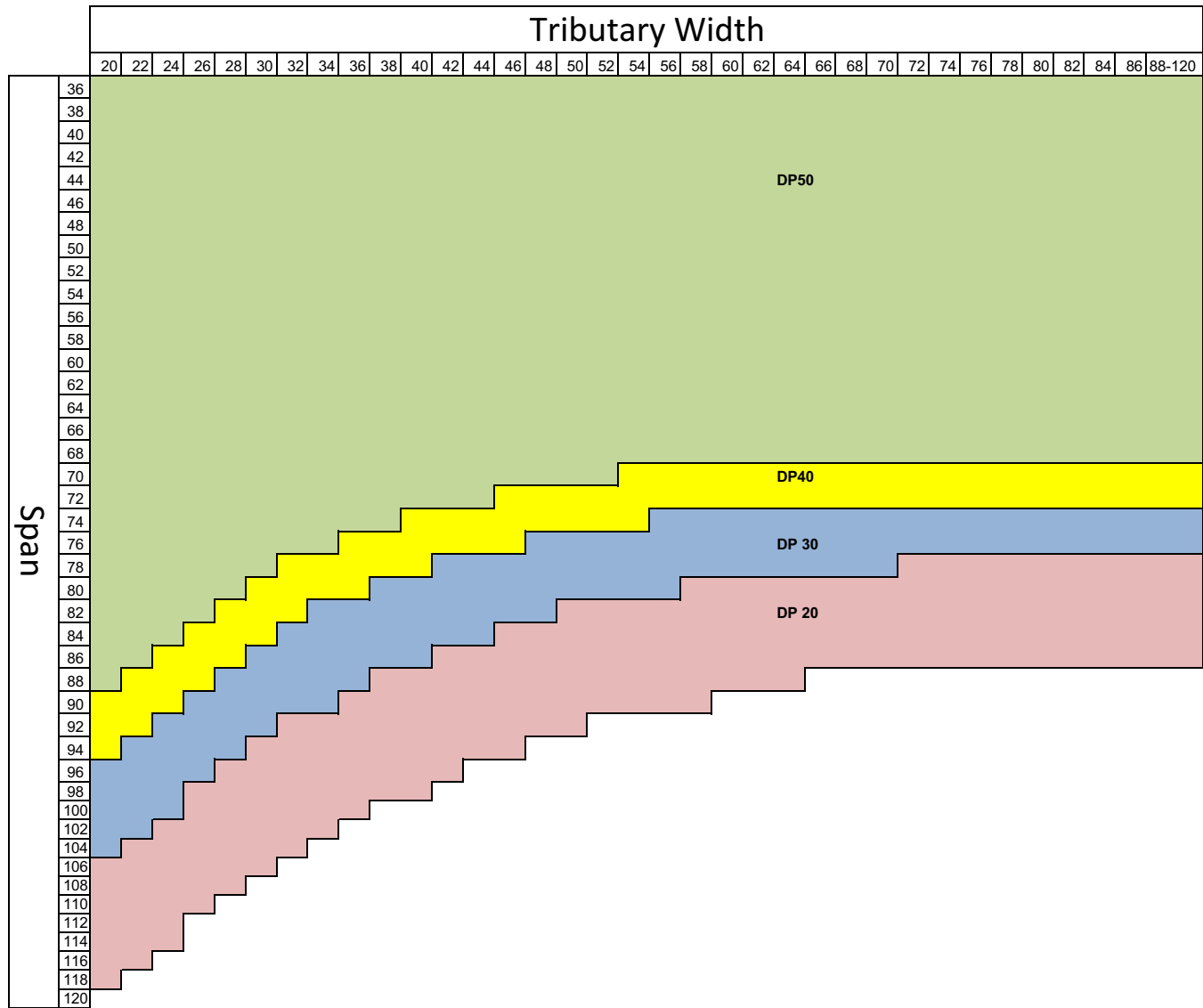
Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

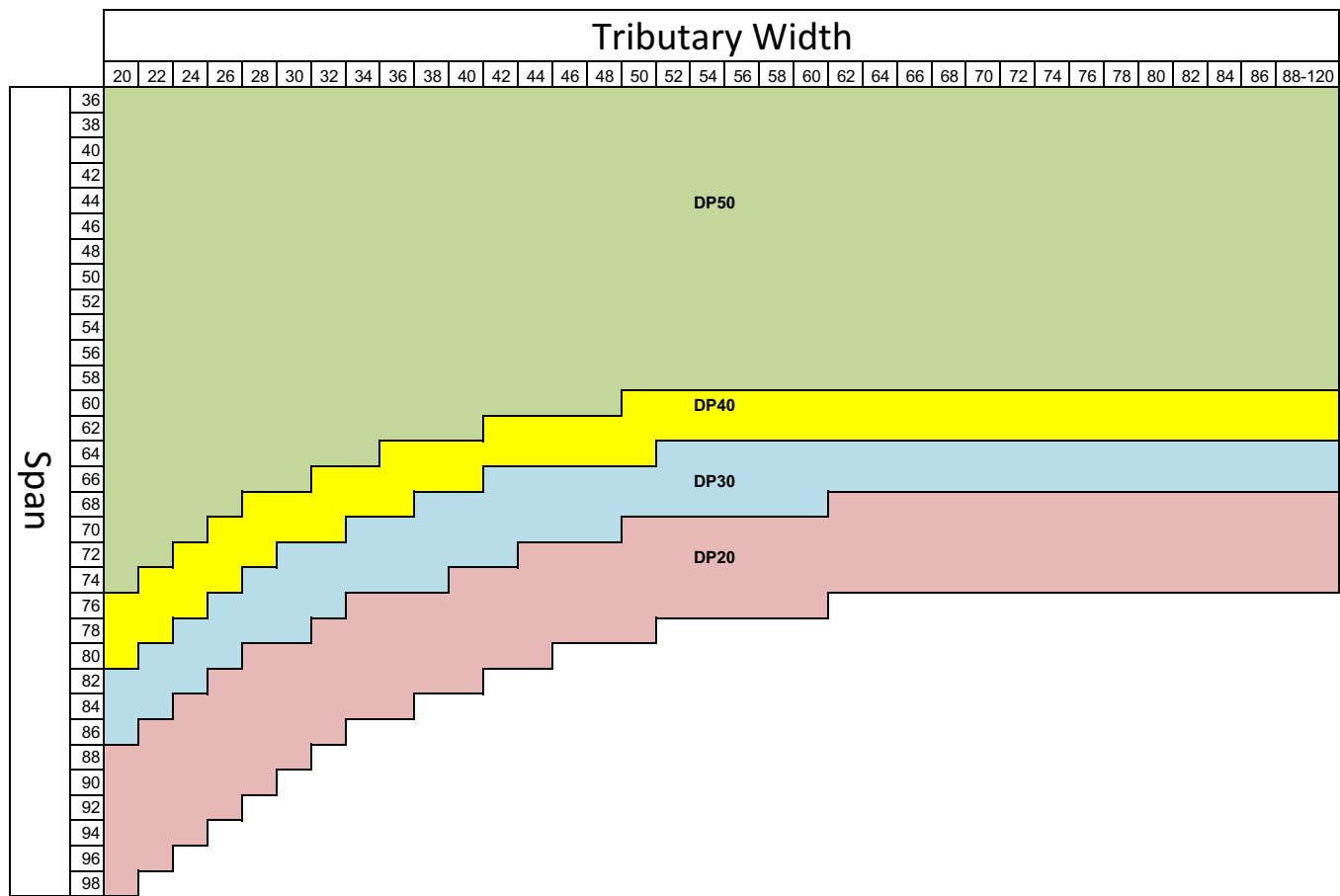
Ultimate Direct Glaze Narrow Frame Mulling - Standard Frame (Ribbon or Stacked Assembly)



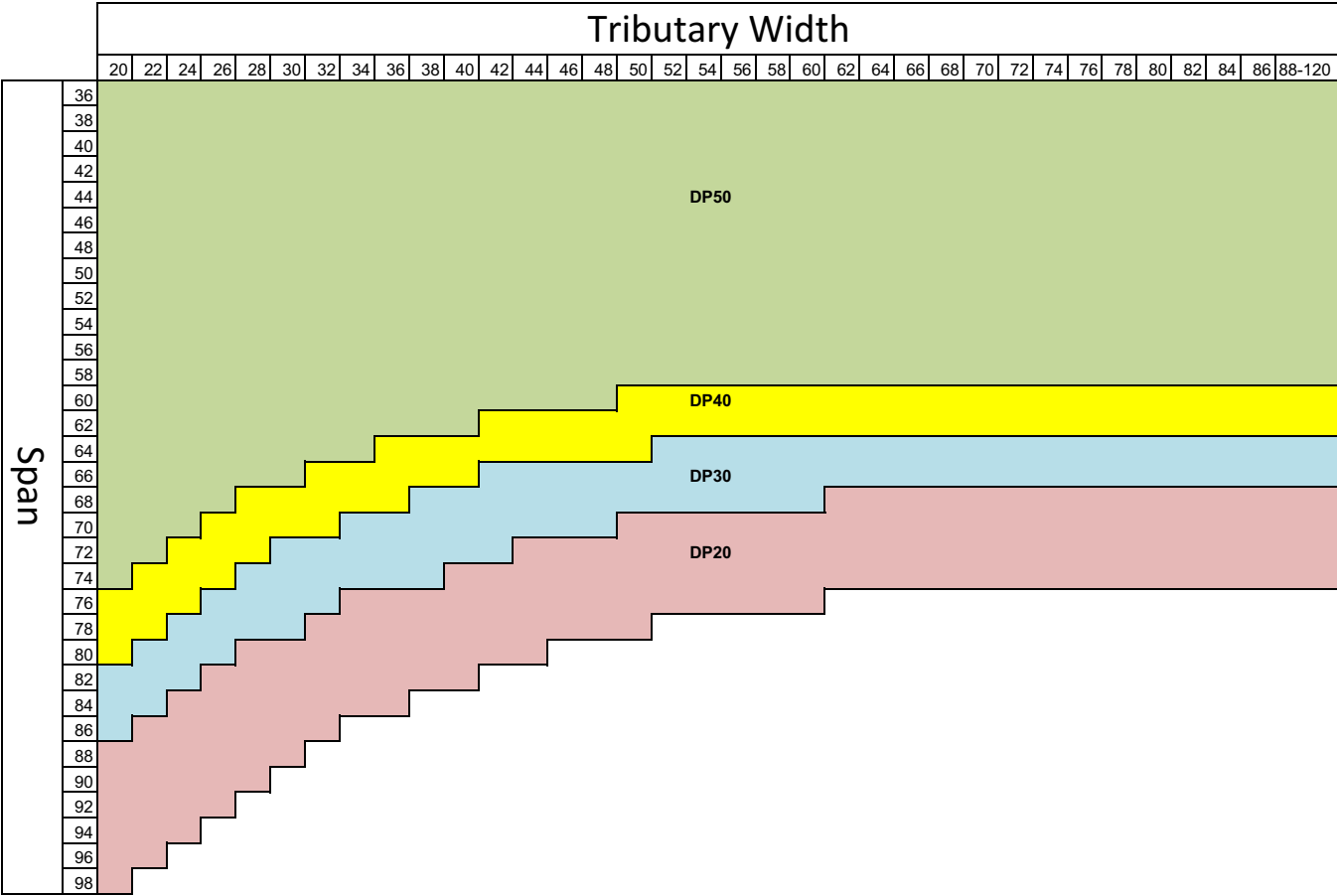
Ultimate Direct Glaze Narrow Frame Mulling - 3/8" Mull Reinforcement(Ribbon or Stacked Assembly)



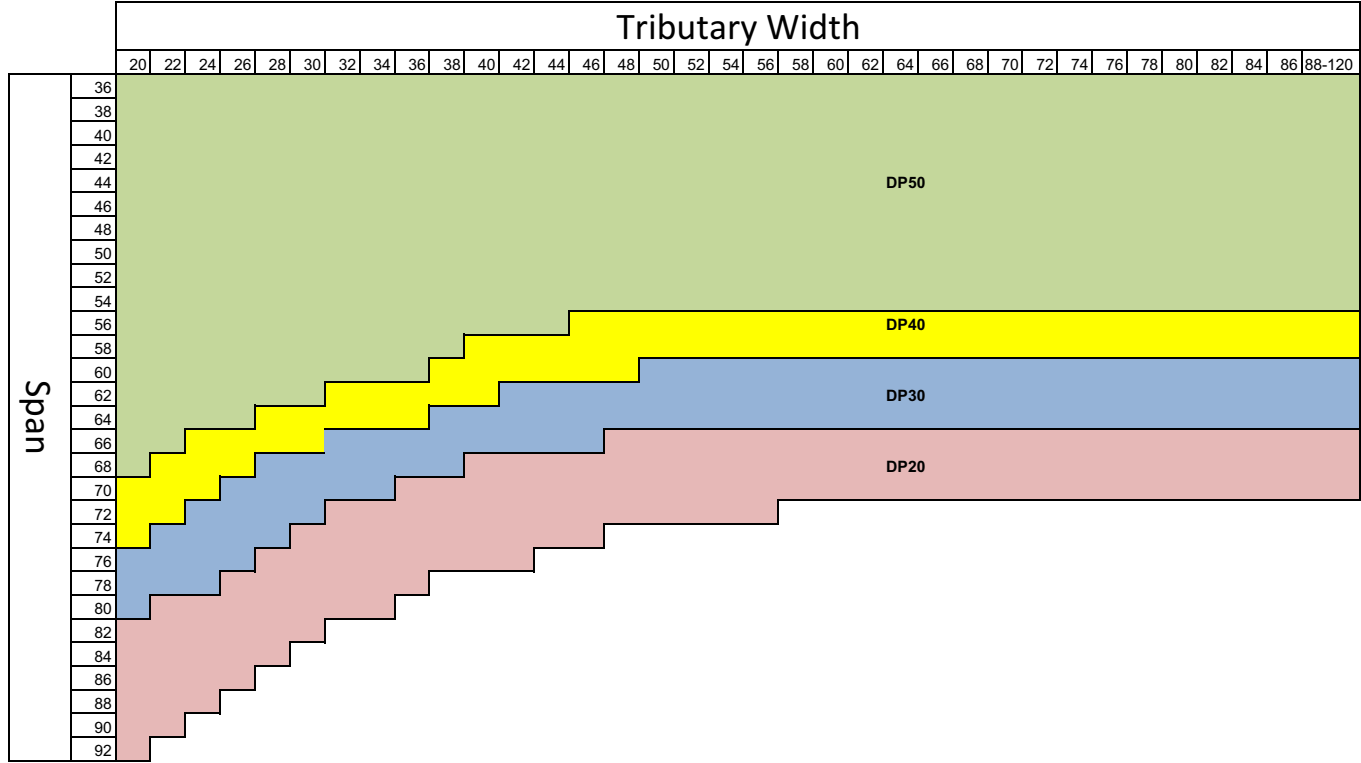
Ultimate Direct Glaze Narrow Frame Mulling - 1" LVL (Ribbon or Stacked Assembly)



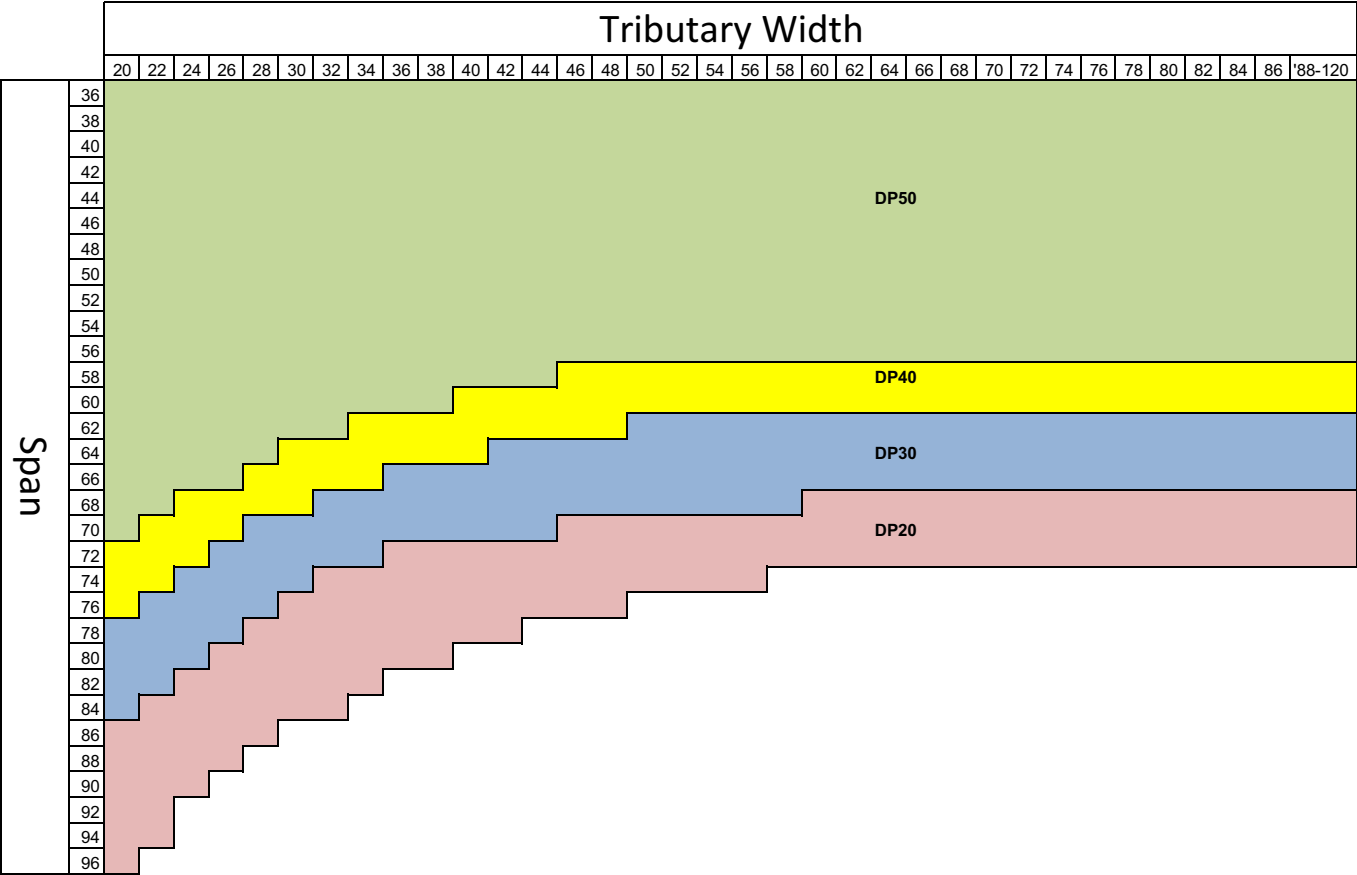
Ultimate Direct Glaze Narrow Frame Mulling - 2" LVL (Ribbon or Stacked Assembly)



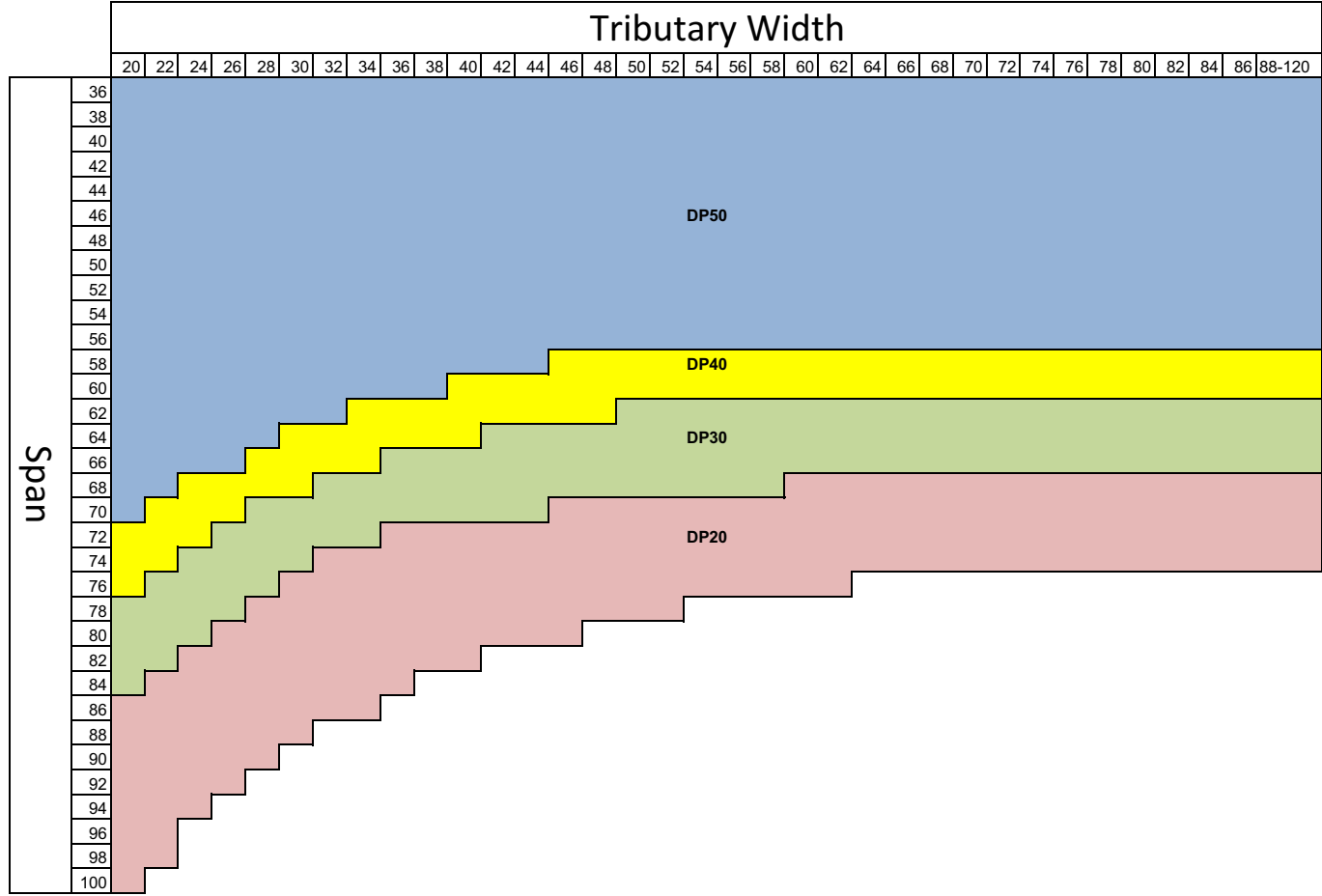
Ultimate Direct Glaze Narrow Frame Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)



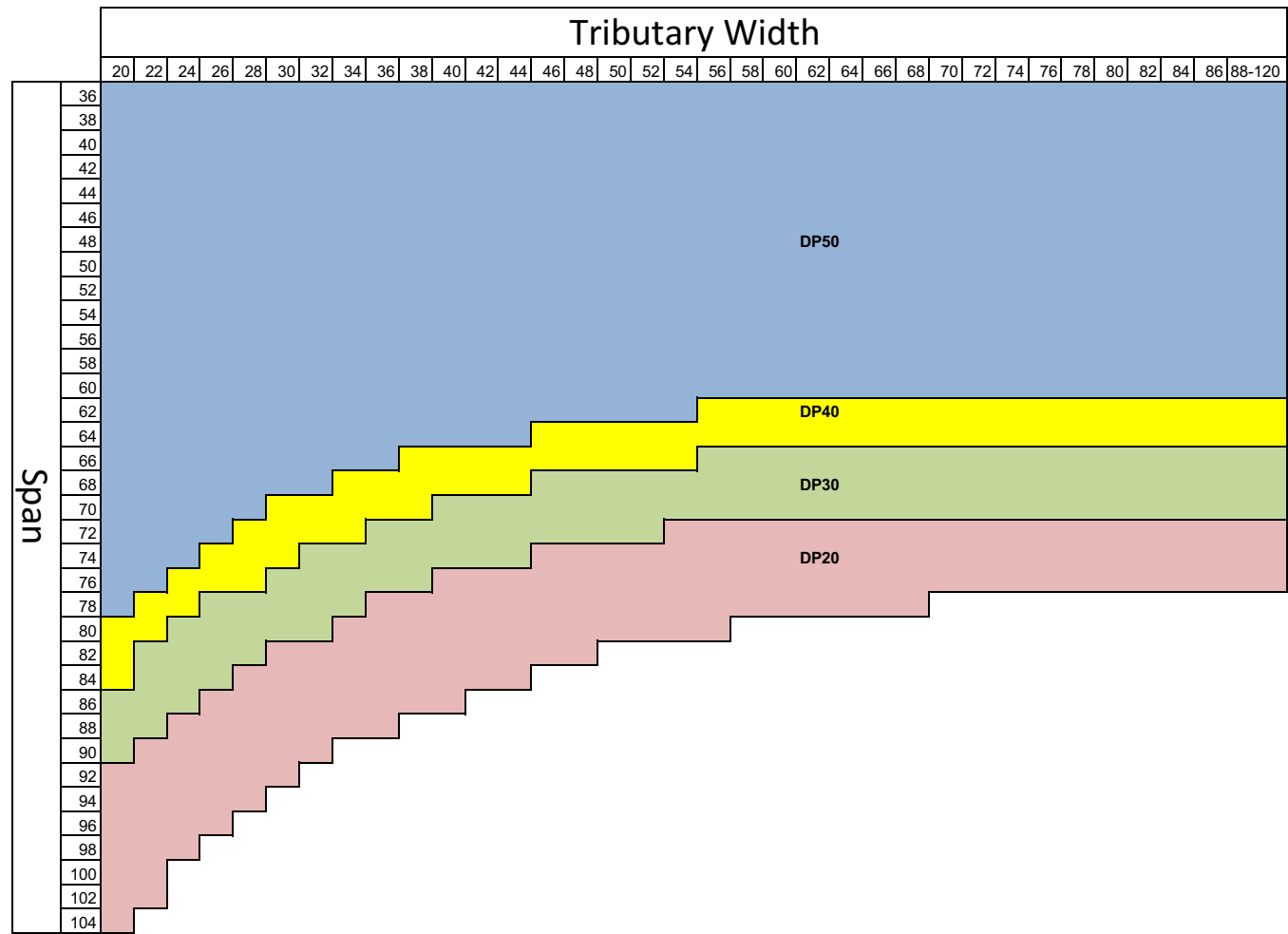
Ultimate Direct Glaze Narrow Frame Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)



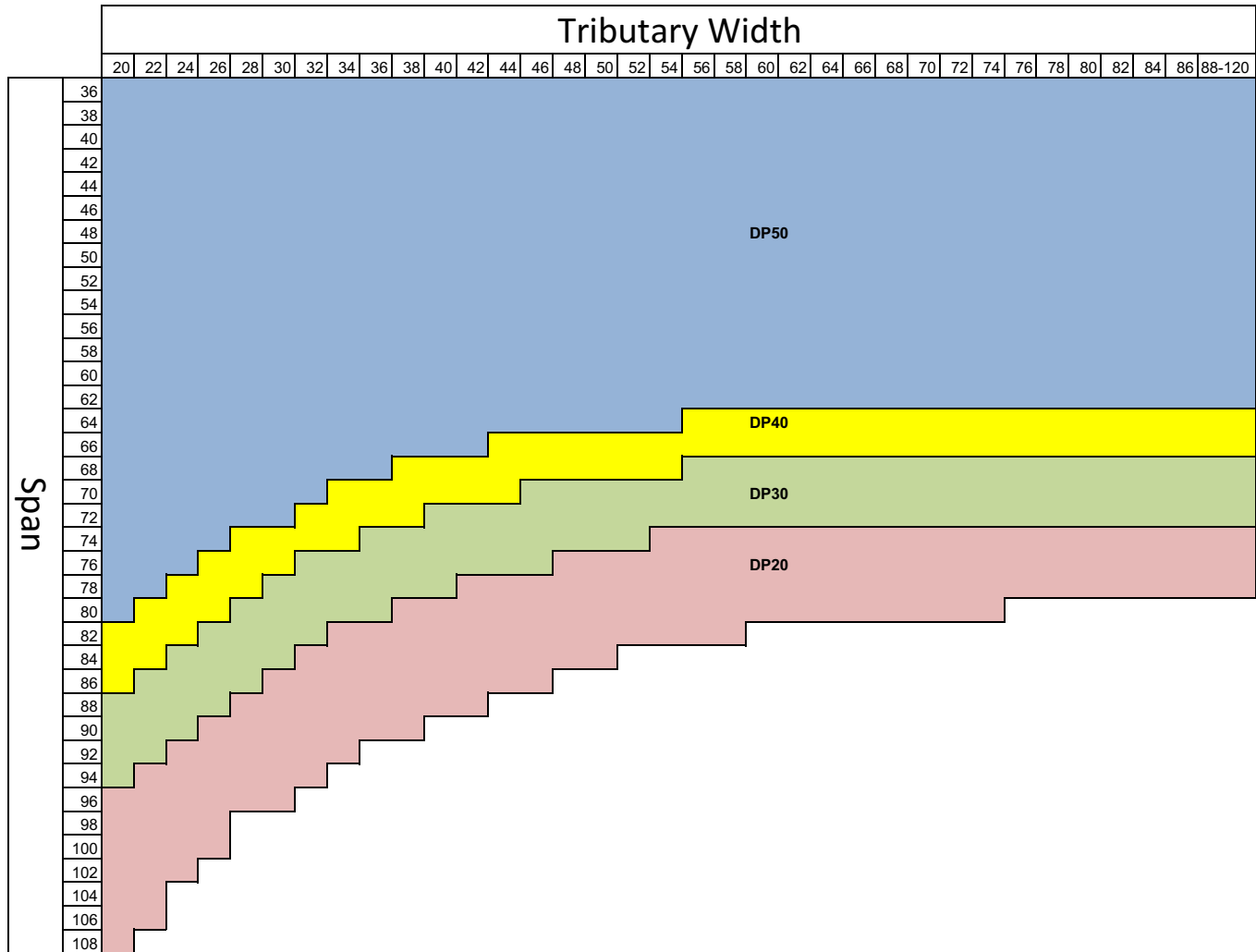
Ultimate Direct Glaze Narrow Frame Mulling - 2" Solid Space Mull (Ribbon or Stacked Assembly)



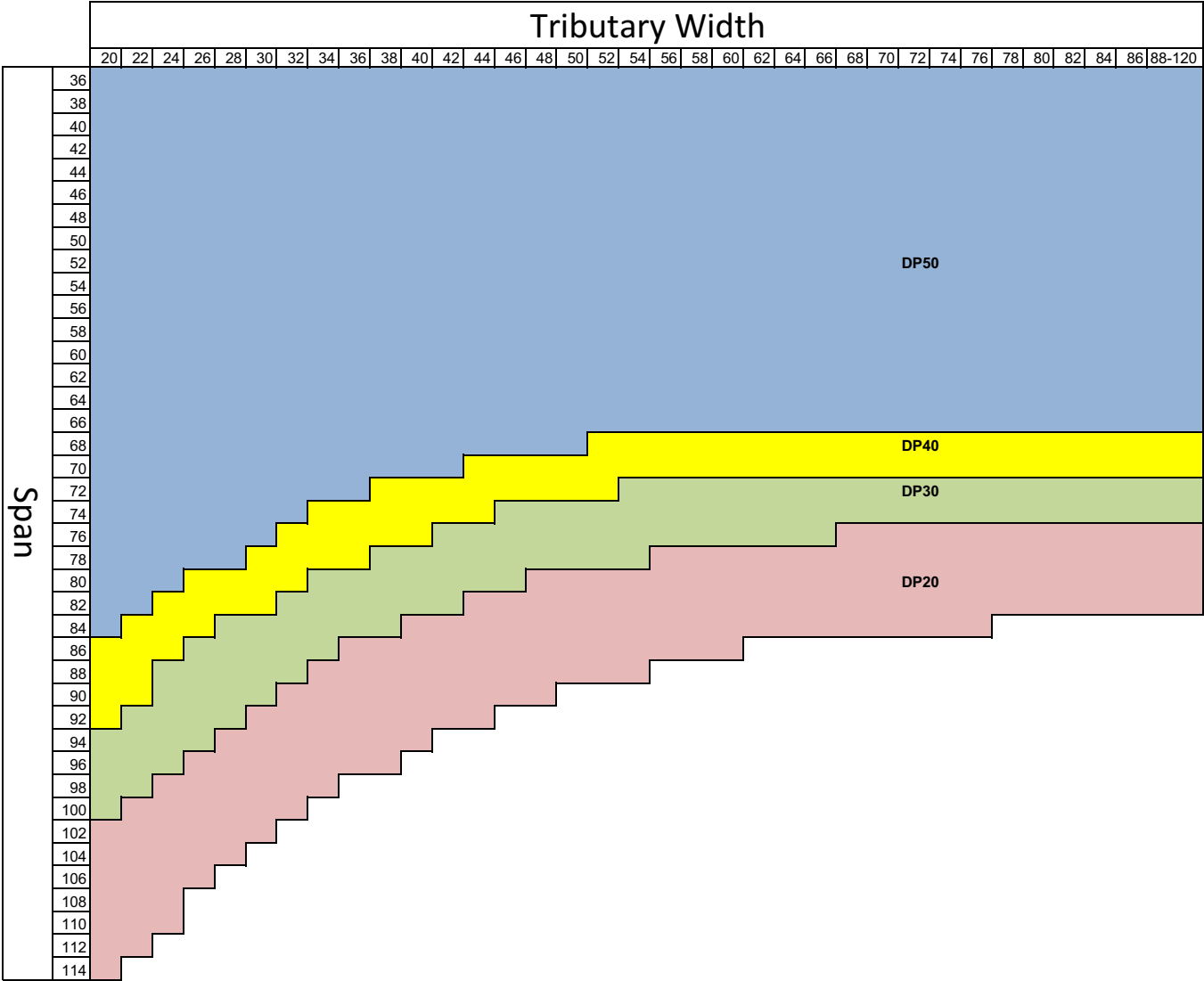
Ultimate Direct Glaze Narrow Frame Mulling - 3" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Narrow Frame Mulling - 4" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Direct Glaze Narrow Frame Mulling - 6" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Double Hung G2 Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Double Hung G2 product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation around an existing structure in the opening.

Products Included

- Ultimate Double Hung G2
- Ultimate Double Hung G2 IZ3

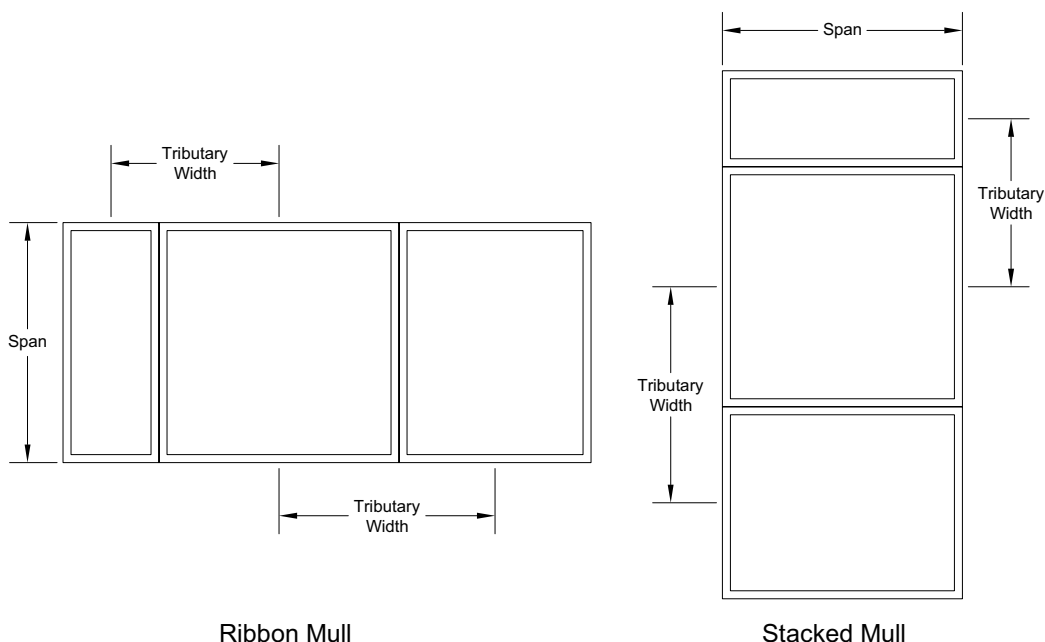
Certified Mull Installation Methods

- Masonry Clips

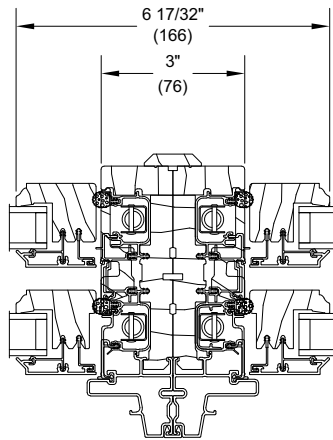
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

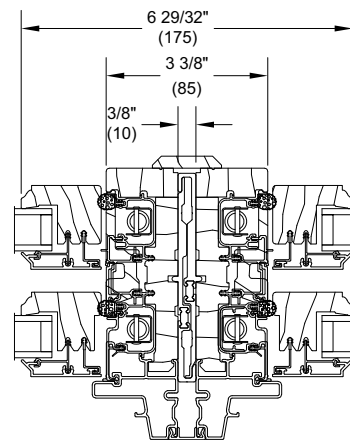
Span - The length of the mullion.



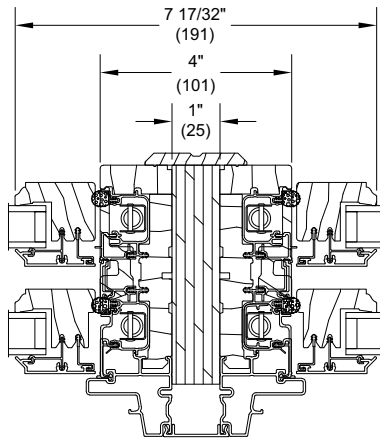
Section Details: Ultimate Double Hung G2 Mulling Types



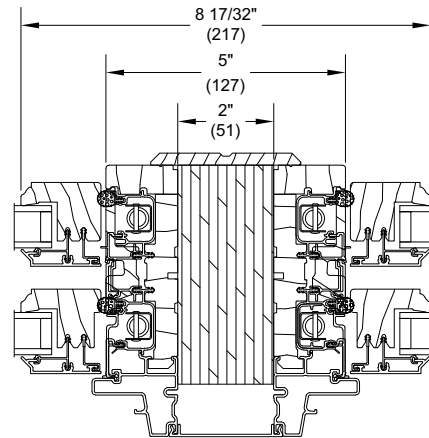
Standard



3/8" Mull Reinforcement

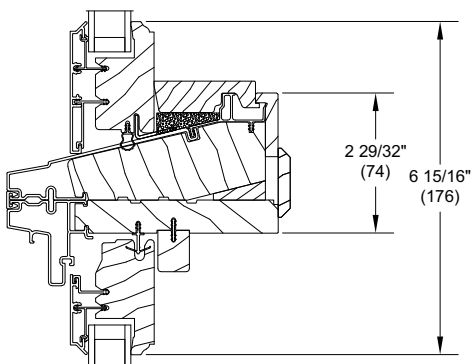


1" LVL

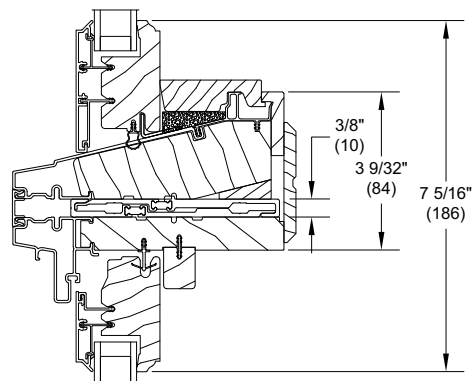


2" LVL

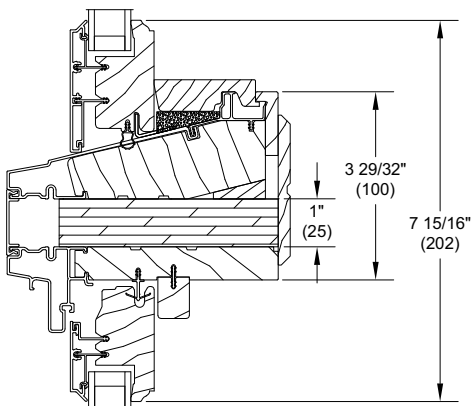
Section Details: Ultimate Double Hung G2 Mulling Types (Continued)



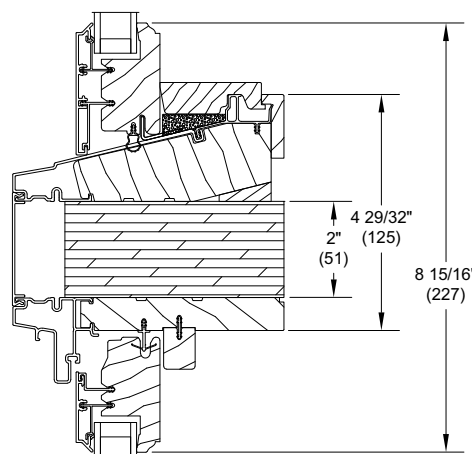
Standard



3/8" Mull Reinforcement

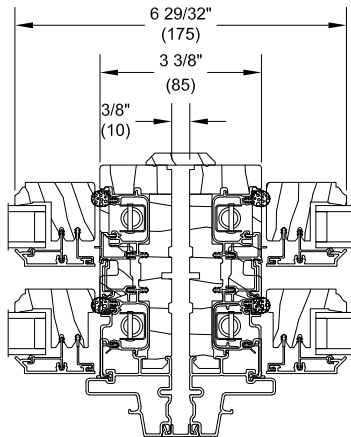


1" LVL

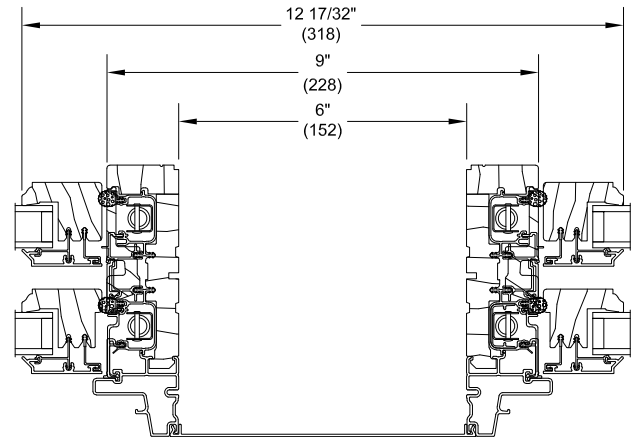


2" LVL

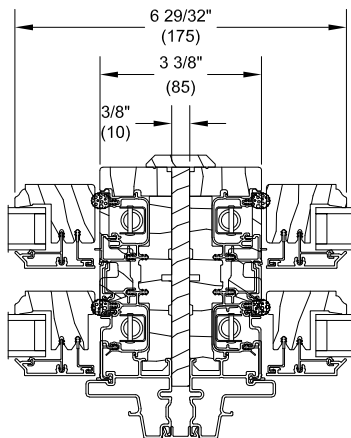
Section Details: Ultimate Double Hung G2 Mulling Types (Continued)



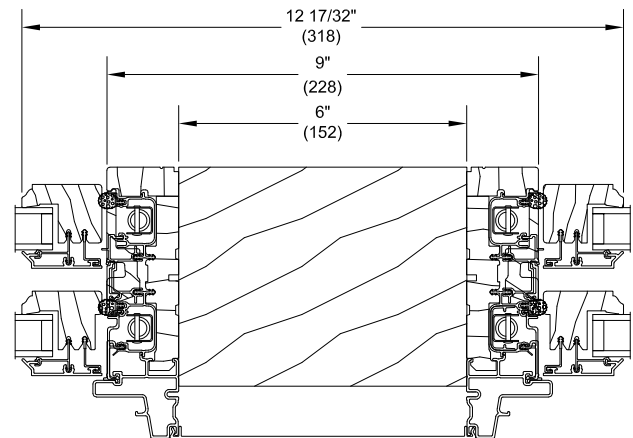
3/8" Space Mull



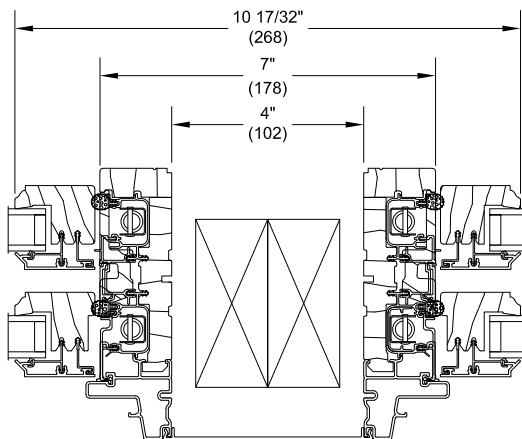
6" Space Mull



3/8" Solid Space Mull



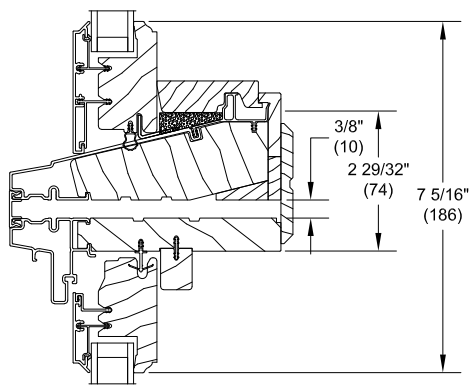
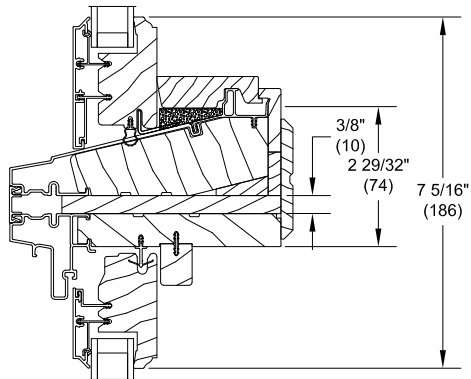
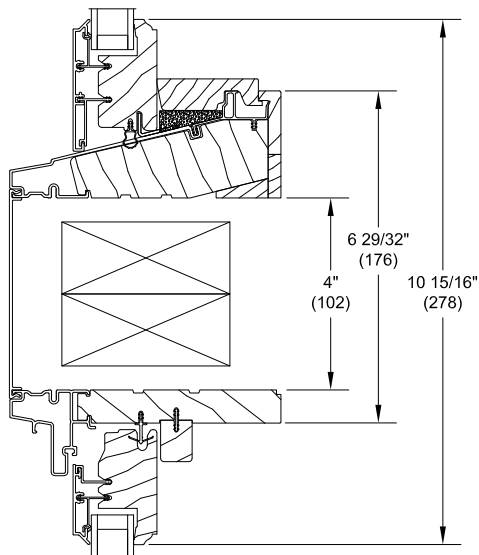
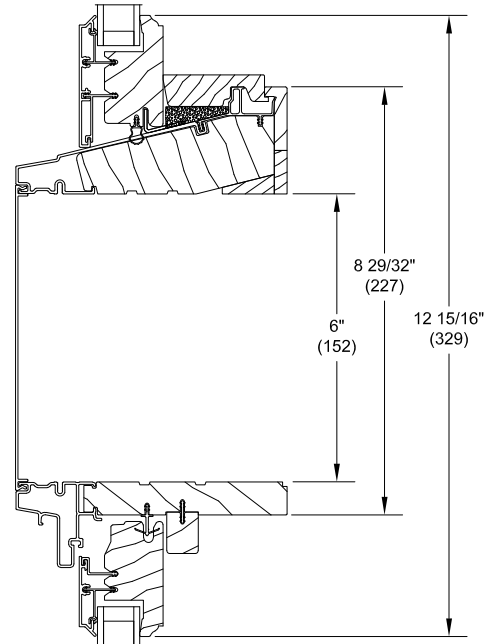
6" Solid Space Mull



4" Stud Pocket Mull

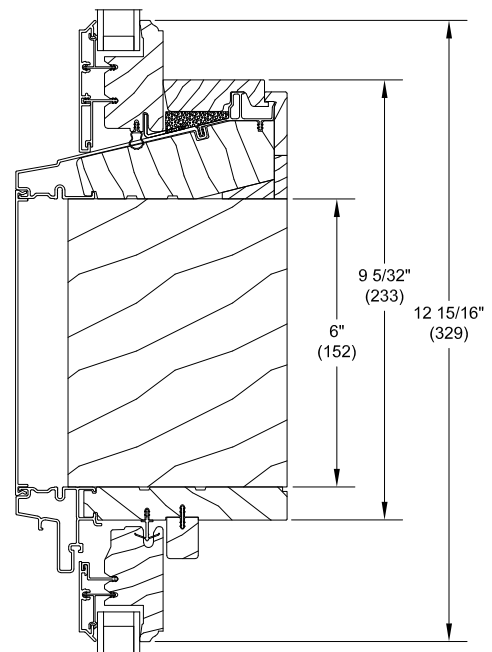
Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

Section Details: Ultimate Double Hung G2 Mulling Types (Continued)

3/8" Space Mull

3/8" Solid Space Mull

4" Stud Pocket Mull

6" Space Mull

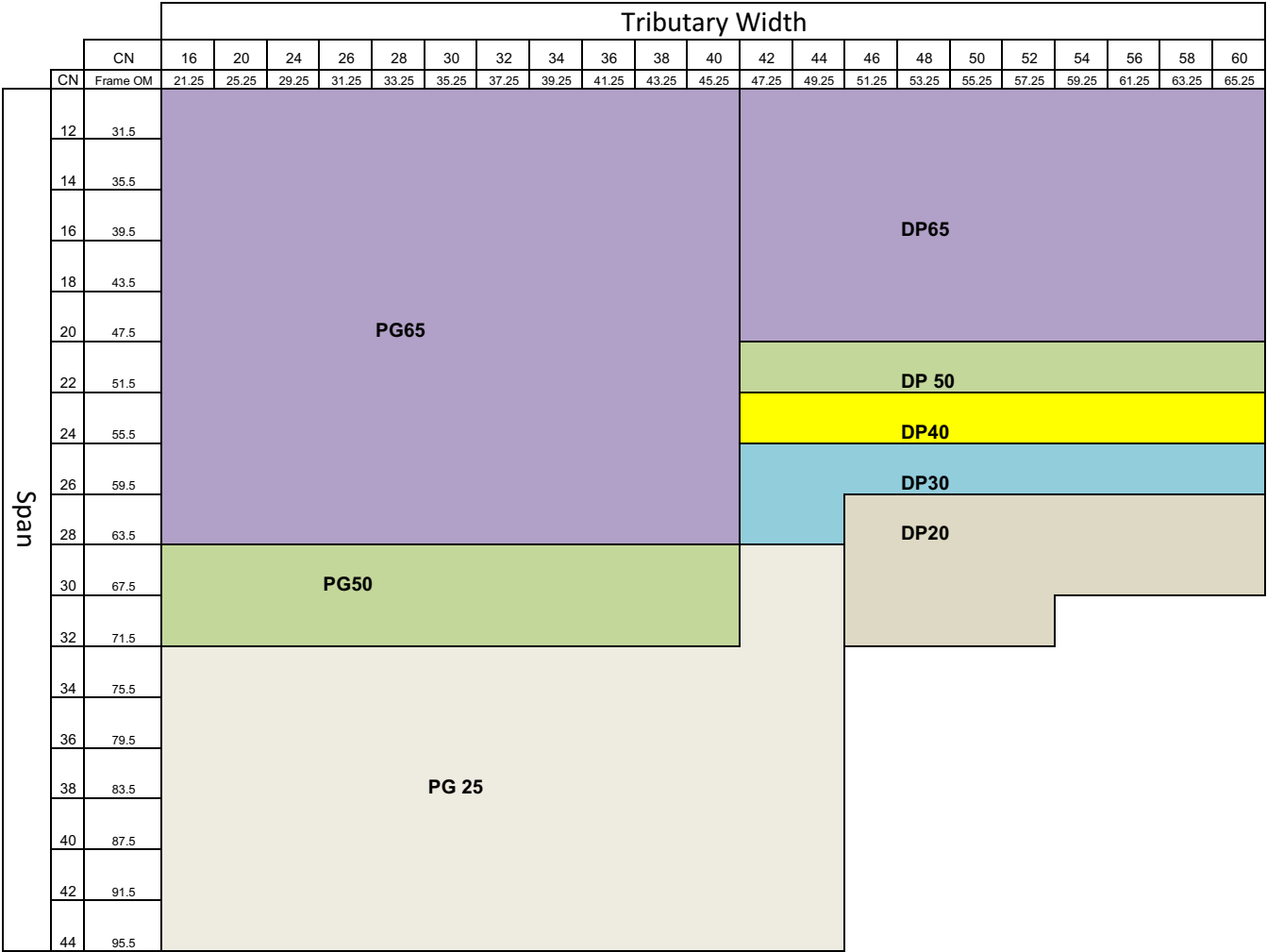
Space Mulls and Solid Space Mulls are also available in 1", 2", 3" and 4" widths.

Marvin provides interior mull trim for mulls up to 2".

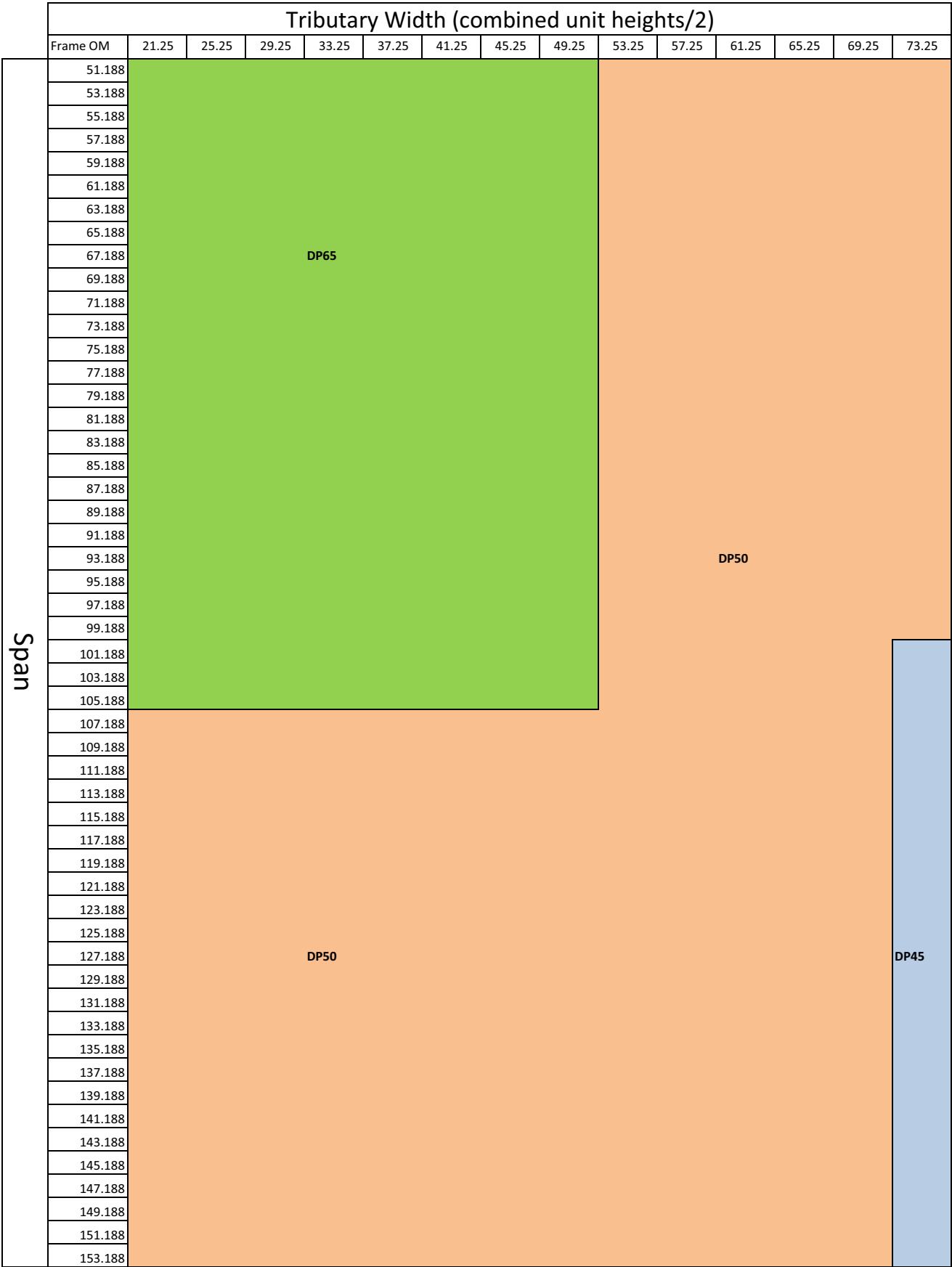

6" Solid Space Mull

Ultimate Double Hung G2 Mulling - Standard Frame (Vertical)

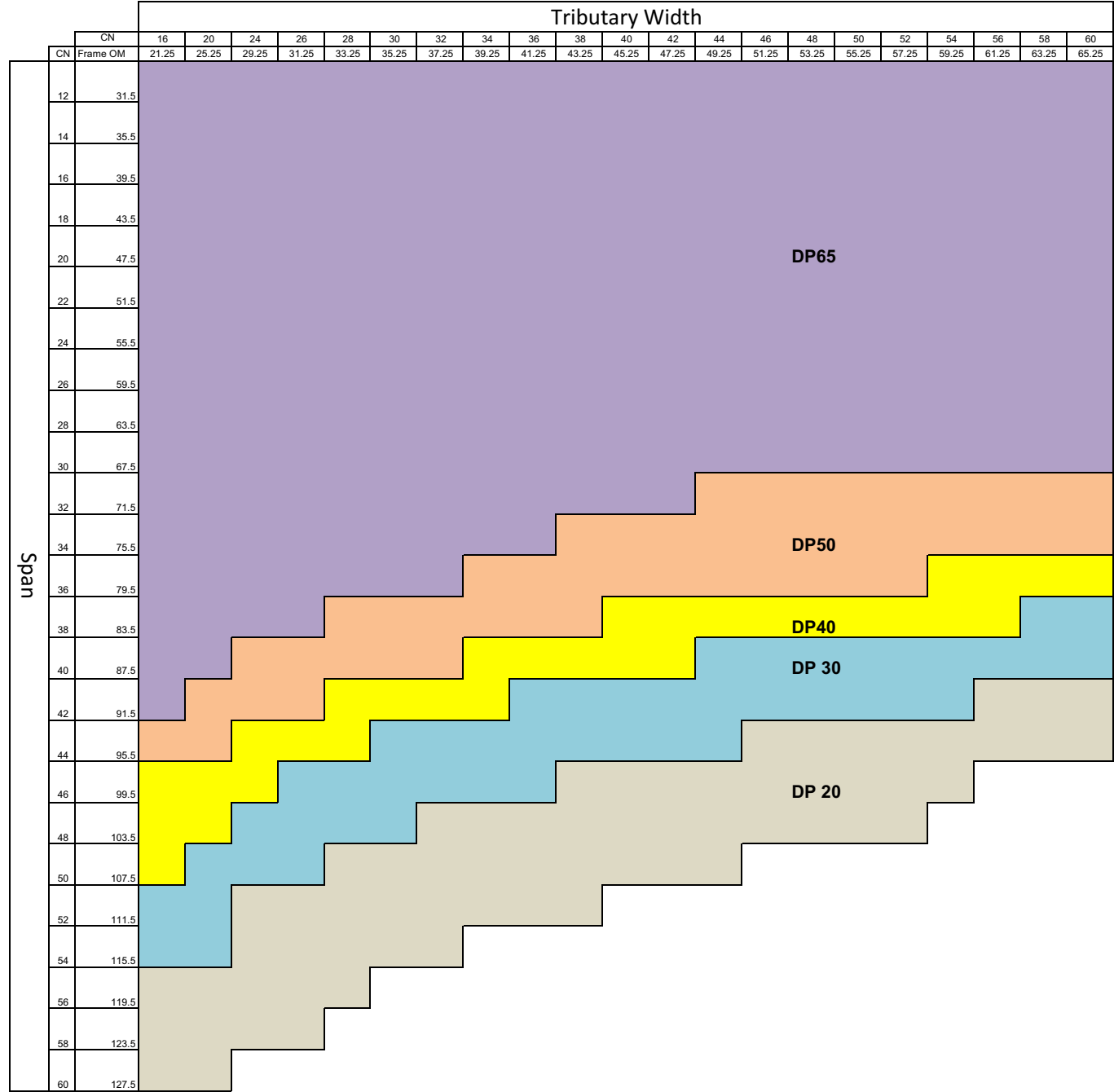
(Ribbon or Stacked Assembly)



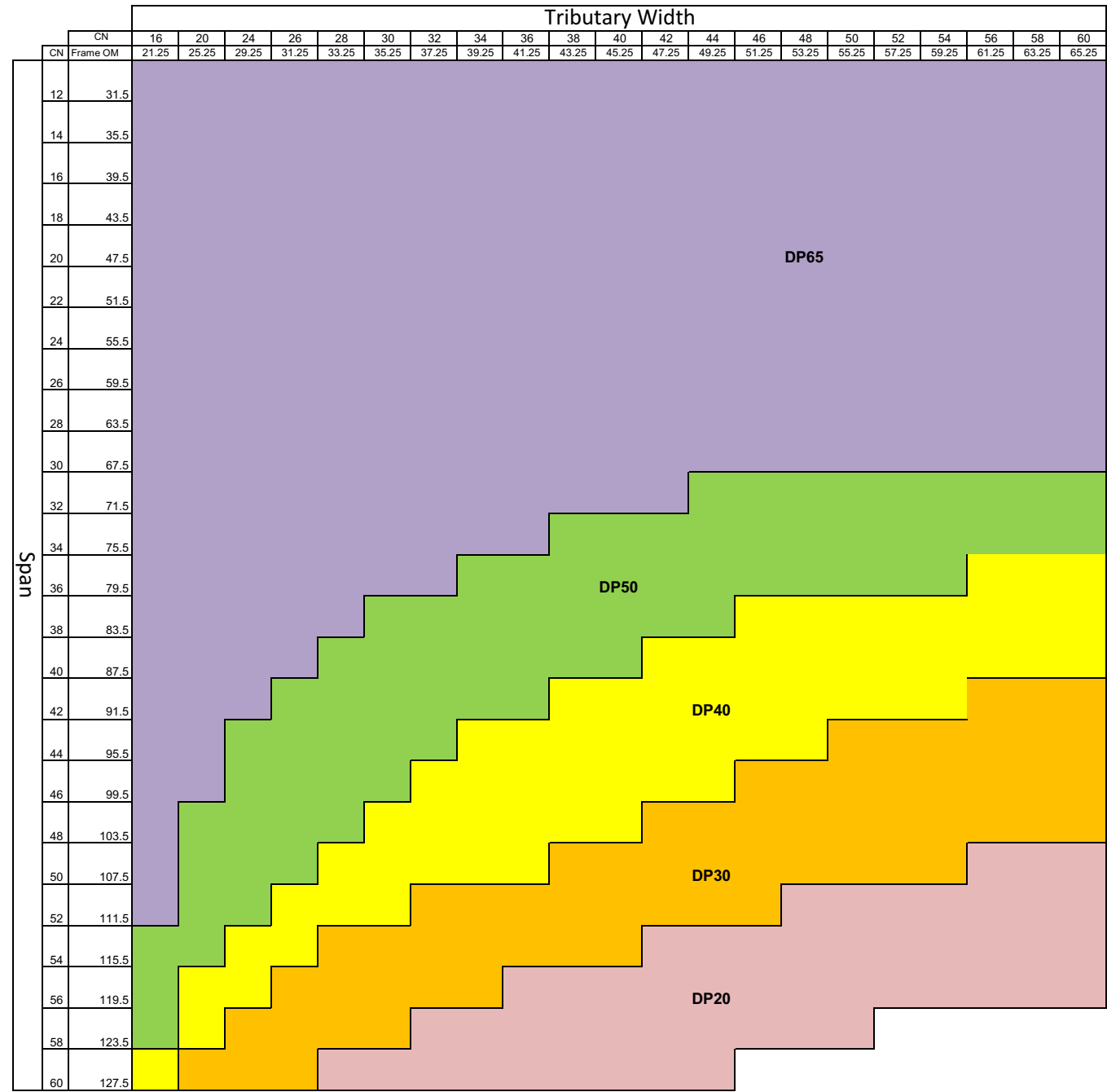
Ultimate Double Hung G2 Mulling - Standard Frame (Horizontal) (Ribbon or Stacked Assembly)



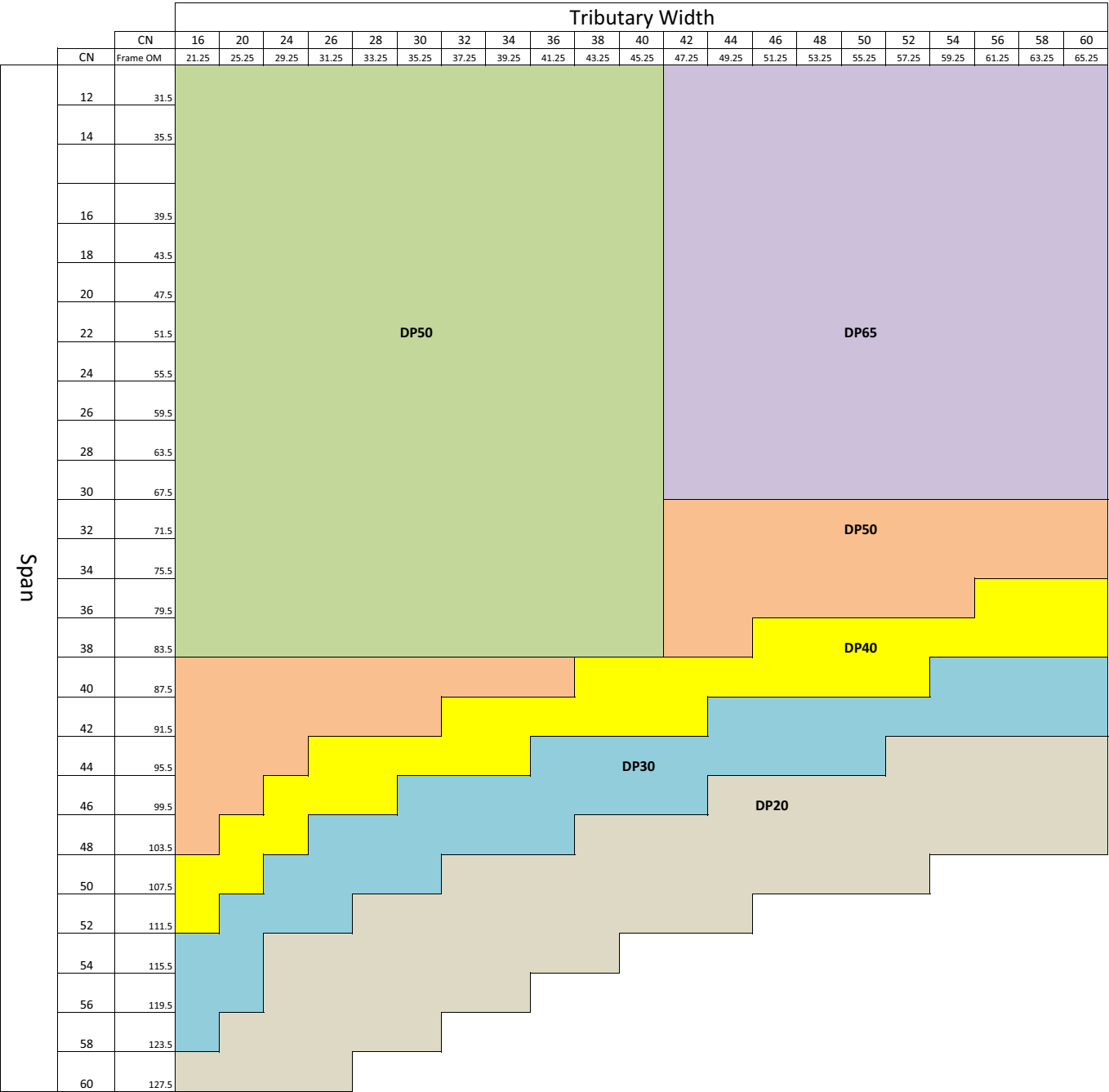
Ultimate Double Hung G2 Mulling - 1" LVL (Vertical) (Ribbon or Stacked Assembly)



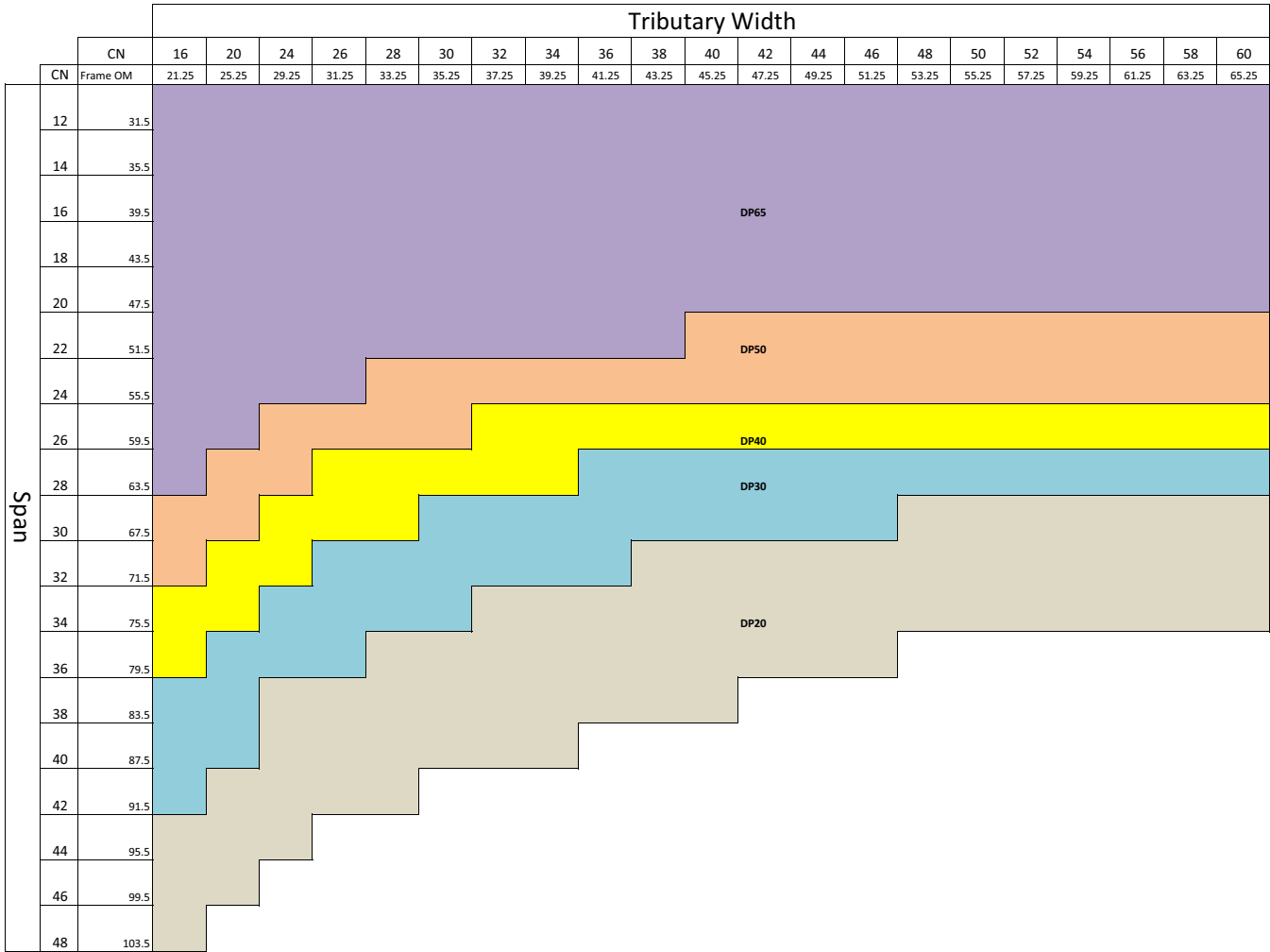
Ultimate Double Hung G2 Mulling - 2" LVL (Vertical) (Ribbon or Stacked Assembly)



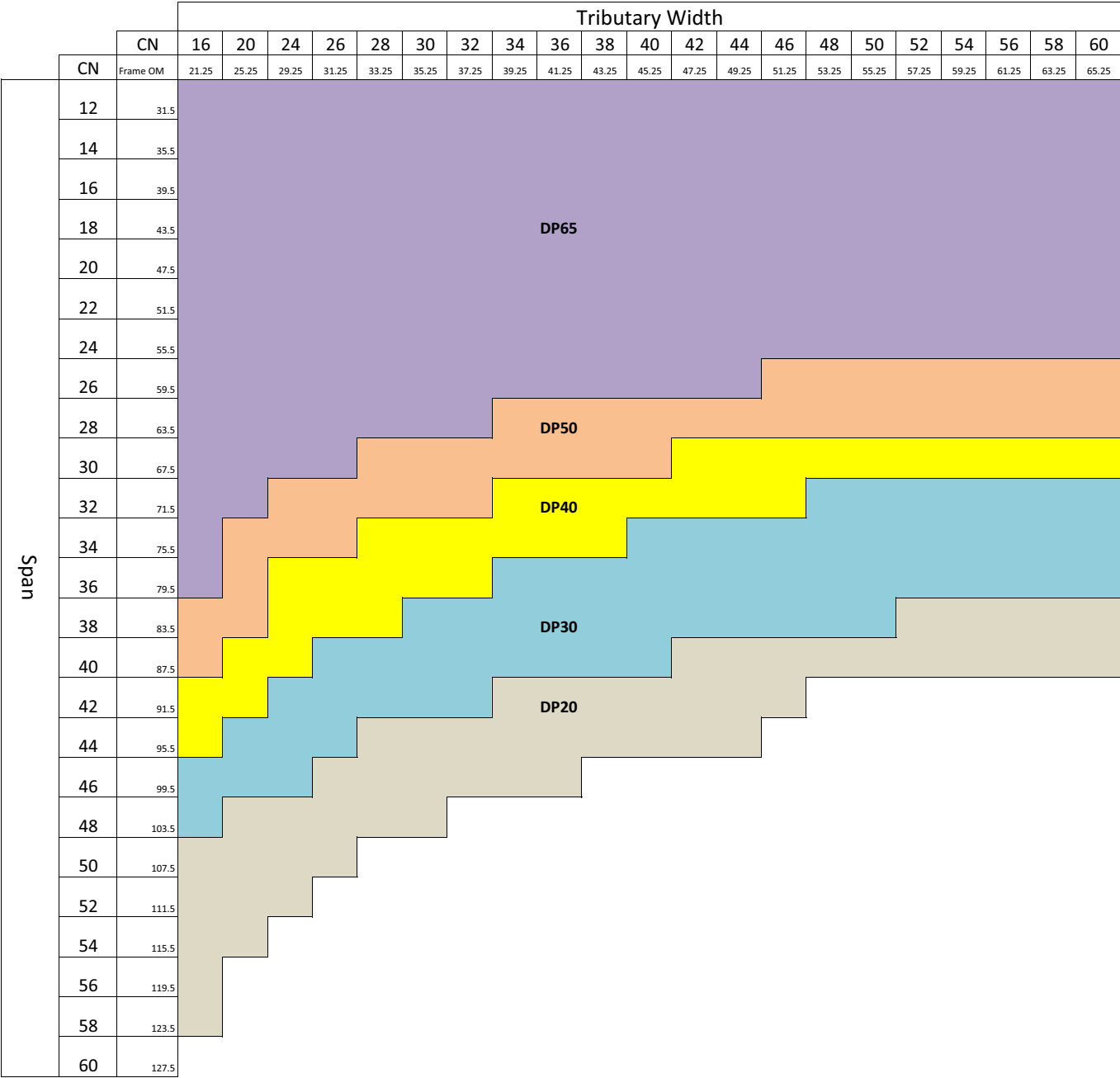
Ultimate Double Hung G2 Mulling - 3/8" Mull Reinforcement (Ribbon or Stacked Assembly)



Ultimate Double Hung G2 Mulling - 3/8" Solid Space Mull (Ribbon or Stacked Assembly)



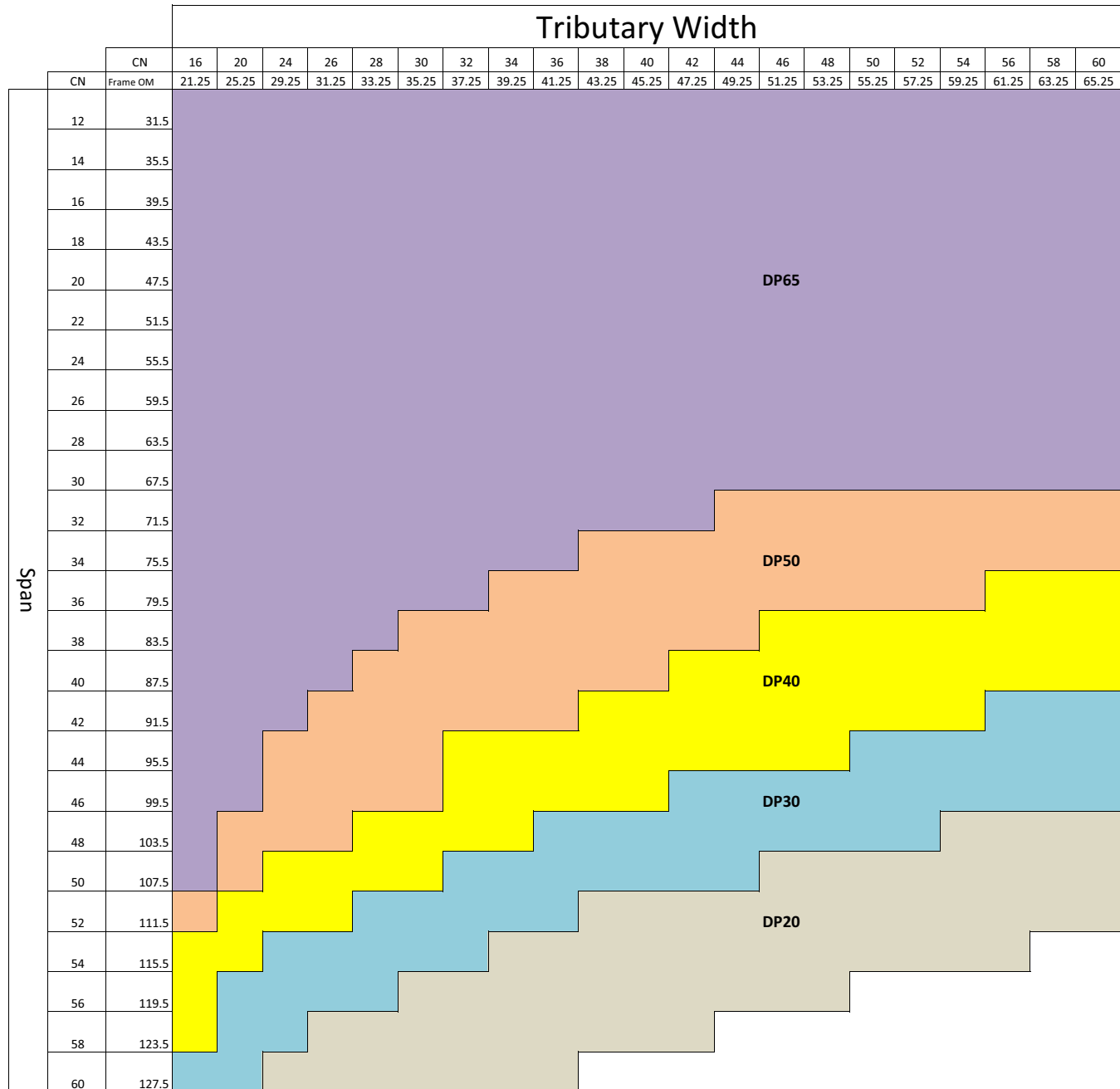
Ultimate Double Hung G2 Mulling - 1" Solid Space Mull (Ribbon or Stacked Assembly)



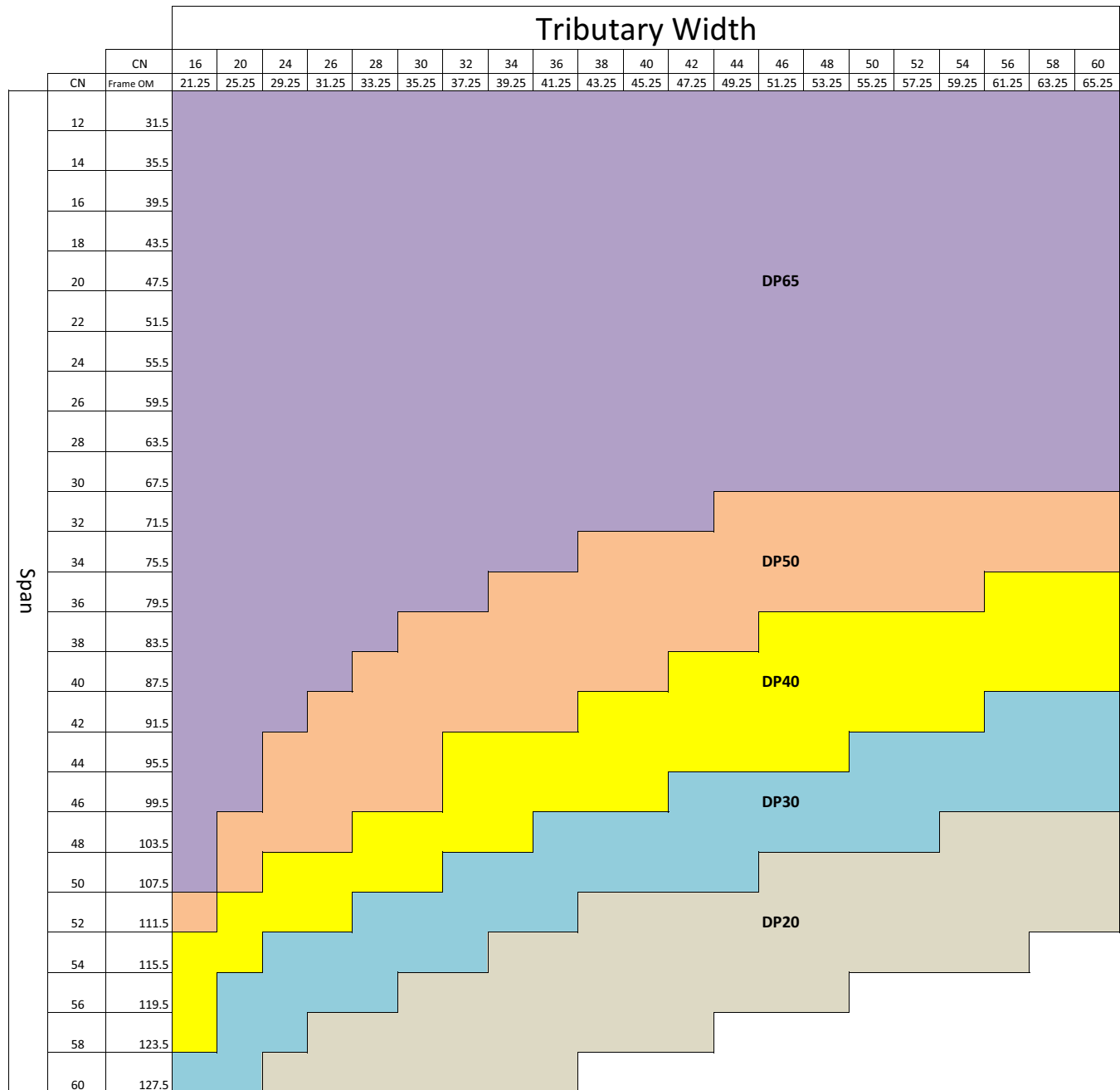
Ultimate Double Hung G2 Mulling - 2" Solid Space Mull (Ribbon or Stacked Assembly)

		Tributary Width																						
	CN	16	20	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60		
Span	CN	Frame OM	21.25	25.25	29.25	31.25	33.25	35.25	37.25	39.25	41.25	43.25	45.25	47.25	49.25	51.25	53.25	55.25	57.25	59.25	61.25	63.25	65.25	
	12	31.5	DP65																					
	14	35.5																						
	16	39.5																						
	18	43.5																						
	20	47.5																						
	22	51.5																						
	24	55.5																						
	26	59.5																						
	28	63.5																						
	30	67.5																						
	32	71.5	DP50																					
	34	75.5																						
	36	79.5	DP40																					
	38	83.5																						
	40	87.5	DP30																					
	42	91.5																						
	44	95.5	DP20																					
	46	99.5																						
	48	103.5																						
50	107.5																							
52	111.5																							
54	115.5																							
56	119.5																							
58	123.5																							
60	127.5																							

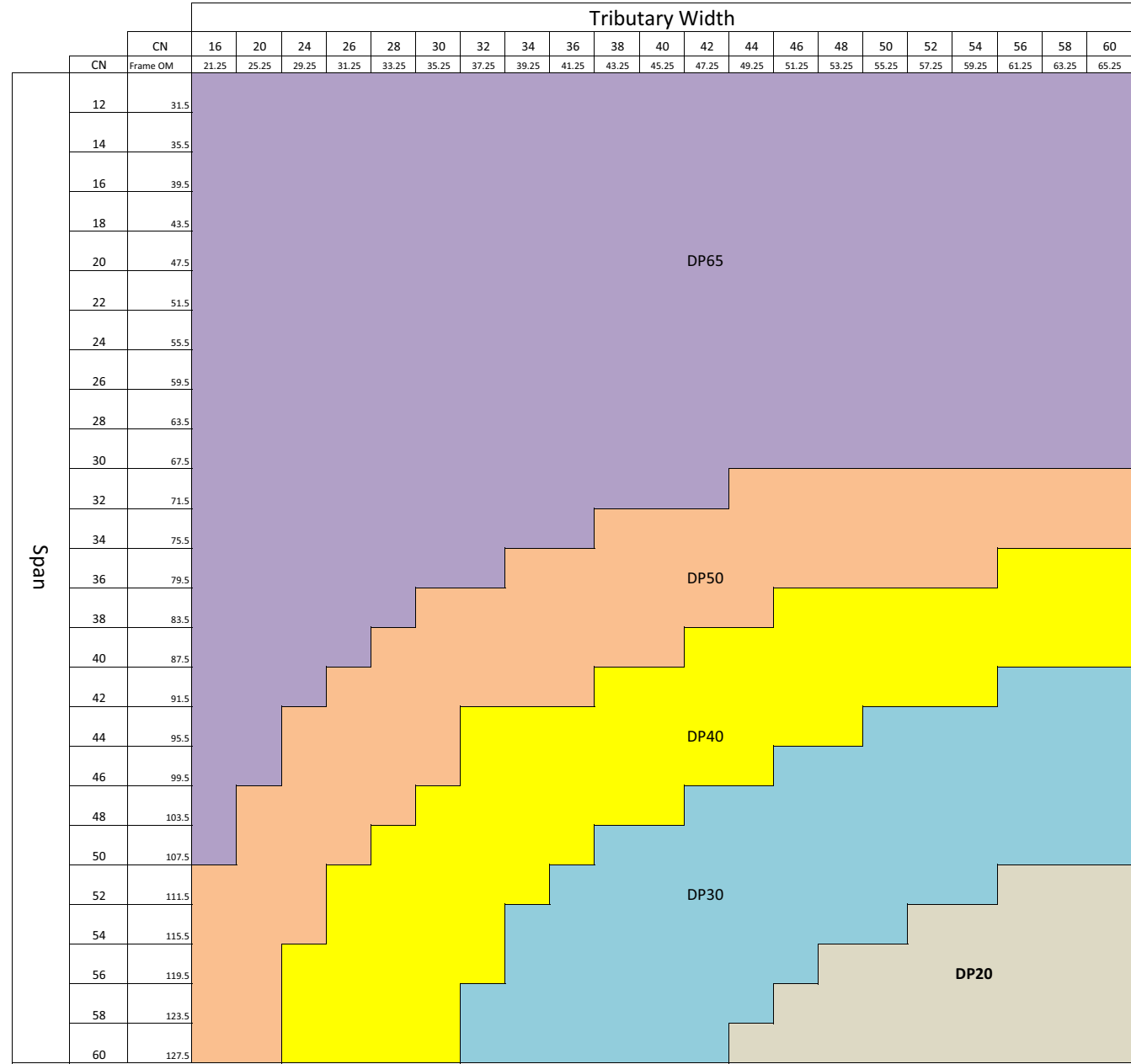
Ultimate Double Hung G2 Mulling - 3" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Double Hung G2 Mulling - 4" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Double Hung G2 Mulling - 6" Solid Space Mull (Ribbon or Stacked Assembly)



Ultimate Glider Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Glider product.

Mull Types:

- **Standard Mull:** Two units mulled directly together without any reinforcement or space mulls between the frames.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation of an existing structure in the opening.

Products Included

- Ultimate Glider

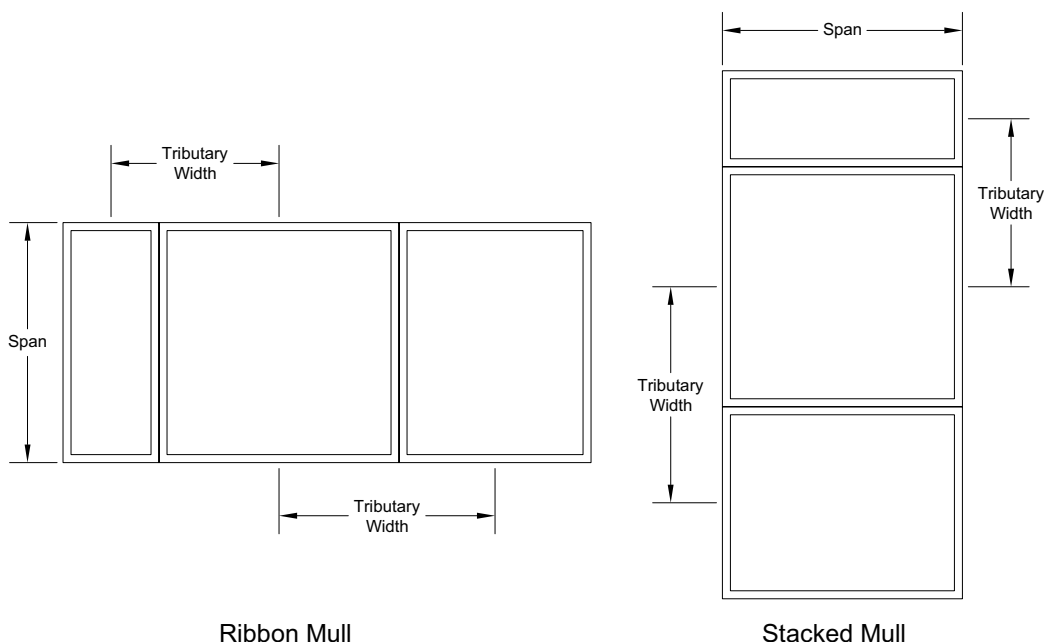
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

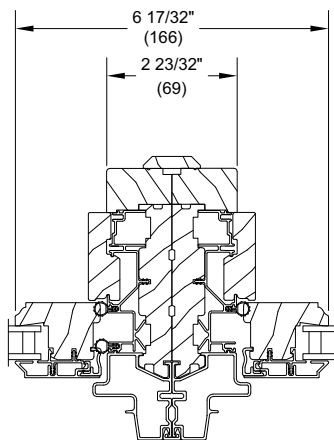
Tributary and Span:

Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

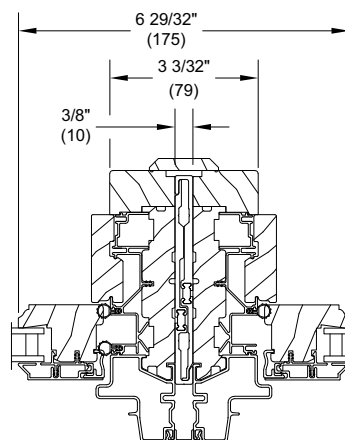
Span - The length of the mullion.



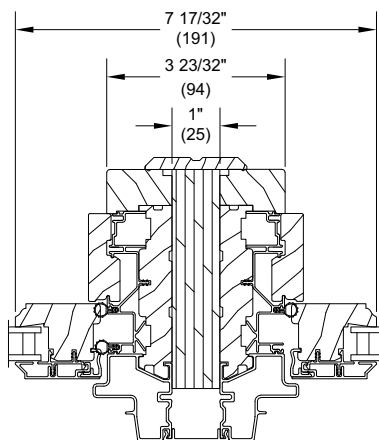
Section Details: Ultimate Glider Mulling Types



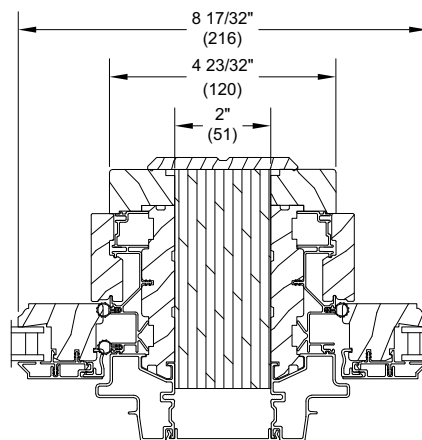
Standard



3/8" Mull Reinforcement

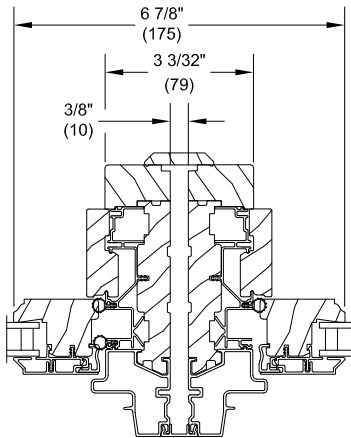


1" LVL

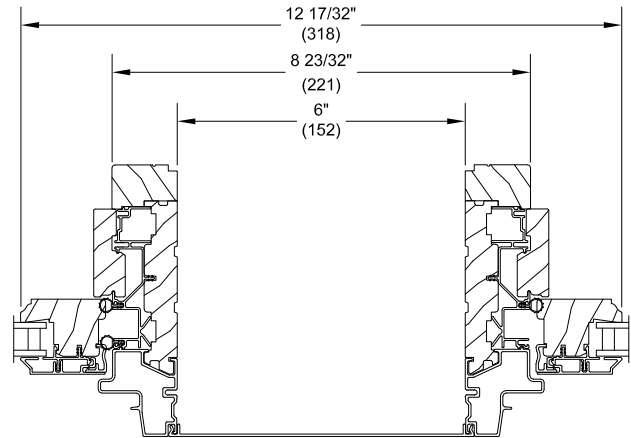


2" LVL

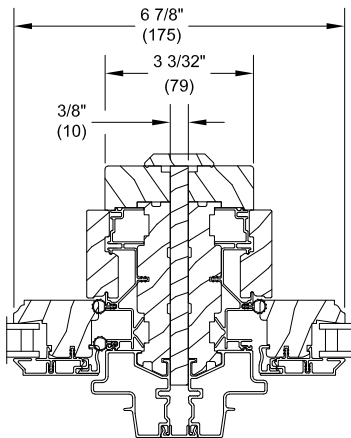
Section Details: Ultimate Glider Mulling Types (Continued)



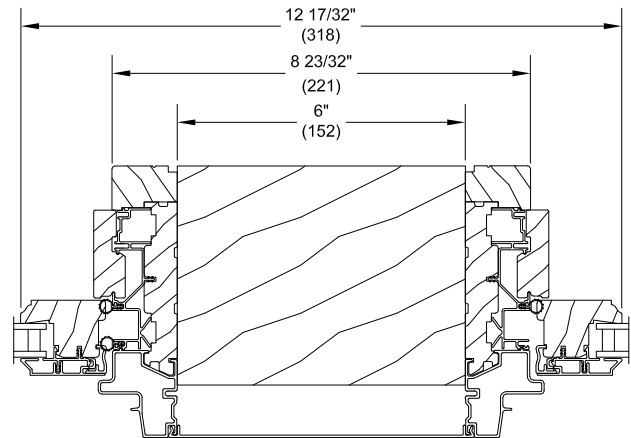
3/8" Space Mull



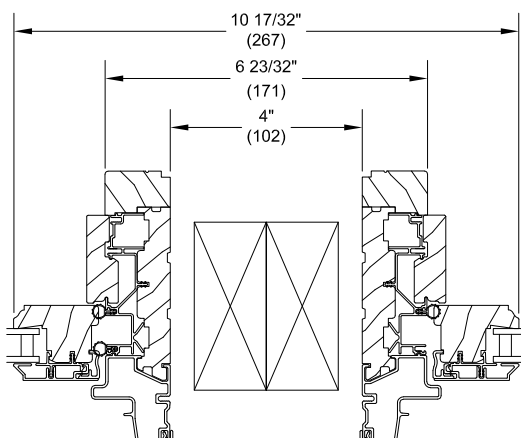
6" Space Mull



3/8" Solid Space Mull



6" Solid Space Mull



4" Stud Pocket Mull

Space Mulls and Solid Space Mulls are available in 3/8", 1", 2", 3", 4" and 6" widths.

Marvin provides interior mull trim for mulls up to 2".

Ultimate Glider Mulling - Standard Frame Vertical (Ribbon or Stacked Assembly)

		Tributary Width											
		CN	30	36	40	46	50	56	60	70	80	90	100
CN	Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2	83 1/2	95 1/2	107 1/2	119 1/2	
Span	30	35 1/2	DP 50										
	36	41 1/2											
	40	47 1/2											
	46	53 1/2											
	50	59 1/2	DP 30										
	56	65 1/2	DP 20										
	60	71 1/2											

Ultimate Glider Mulling - 3/8" MRF, 1" LVL, 2" LVL (Vertical) (Ribbon or Stacked Assembly)

		Tributary Width											
		CN	30	36	40	46	50	56	60	70	80	90	100
	CN	Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2	83 1/2	95 1/2	107 1/2	119 1/2
Span	30	35 1/2	DP 50										
	36	41 1/2											
	40	47 1/2											
	46	53 1/2											
	50	59 1/2											
	56	65 1/2											
	60	71 1/2											

Ultimate Glider Mulling - 3/8" Solid Space Mull (Vertical) (Ribbon or Stacked Assembly)

		Tributary Width											
		CN	30	36	40	46	50	56	60	70	80	90	100
CN		Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2	83 1/2	95 1/2	107 1/2	119 1/2
Span	30	35 1/2	DP 50										
	36	41 1/2											
	40	47 1/2											
	46	53 1/2											
	50	59 1/2	DP 40										
	56	65 1/2	DP 30										
	60	71 1/2	DP 20										

Ultimate Glider Mulling - 1" Solid Space Mull (Vertical) (Ribbon or Stacked Assembly)

		Tributary Width											
		CN	30	36	40	46	50	56	60	70	80	90	100
CN	Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2	83 1/2	95 1/2	107 1/2	119 1/2	
Span	30	35 1/2	DP 50										
	36	41 1/2											
	40	47 1/2											
	46	53 1/2											
	50	59 1/2											
	56	65 1/2											
	60	71 1/2	DP 40					DP 30					

Ultimate Glider Mulling - 1" and 2" LVL (Horizontal) (Ribbon or Stacked Assembly)

			Tributary Width								
			CN	30	36	40	46	50	56	60	
			CN	Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2
Span					DP 50						
	30	35 1/2									
	36	41 1/2									
	40	47 1/2									
	46	53 1/2									
	50	59 1/2									
	56	65 1/2									
	60	71 1/2	DP 40								
	66	77 1/2									
	70	83 1/2	DP 30								
	76	89 1/2									
	80	95 1/2	DP 20								
	86	101 1/2									
	90	107 1/2									
	96	113 1/2									

Ultimate Glider Mulling - Solid Space Mull (2", 3", 4" and 6") (Ribbon or Stacked Assembly)

		Tributary Width											
		CN	30	36	40	46	50	56	60	70	80	90	100
CN	Frame OM	35 1/2	41 1/2	47 1/2	53 1/2	59 1/2	65 1/2	71 1/2	83 1/2	95 1/2	107 1/2	119 1/2	
Span			DP 50										
	30	35 1/2											
	36	41 1/2											
	40	47 1/2											
	46	53 1/2											
	50	59 1/2											
	56	65 1/2											
	60	71 1/2											

Multi-High, Multi-Wide Mulling

Marvin offers a variety of mull options for many of the Marvin window and door projects. Some mulls can be done in the factory. Others would need to be done in the field. Some mulls create a certified assembly according to third-party testing.

Marvin Mull Options:

Marvin-Supplied

- **Standard Mull:** Two or more units mulled together directly without any reinforcement or space between the frames. Reinforcement may be required either vertically or horizontally to meet structural design pressure ratings.
- **3/8" Mull Reinforcement (MRF):** A two-piece, thermally-broken aluminum reinforcement that allows for either factory or field assembly of the mullion.
- **Solid Space Mull:** Solid continuous wood piece is used to reinforce the units and space them apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **LVL Mull Reinforcement:** Laminated Veneered Lumber is used as a solid space mull.
 - LVL is 1.7 to 1.9 times stronger than regular wood.
 - 1" and 2" widths are available from Marvin.
- **Space Mull:** Non-continuous blocks of wood are used to space units apart.
 - 3/8", 1", 2", 3", 4" and 6" widths are available.
- **Stud Pocket:** An exterior mull cap is applied to the units with a space in between the units to allow for installation of an existing structure in the opening.

Field Supplied and Applied

- **Tube Mull:** Tube aluminum or steel used to reinforce mulled assemblies.
- **Flat Mull:** Flat Steel or Aluminum used to reinforce mulled assemblies.

NOTE: Multi-High Multi-Wide Assemblies with any side that exceed 72" in either direction will be shipped with a temporary blocking around the entire perimeter of the assembly to provide support during shipping and handling.

Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

Anchoring

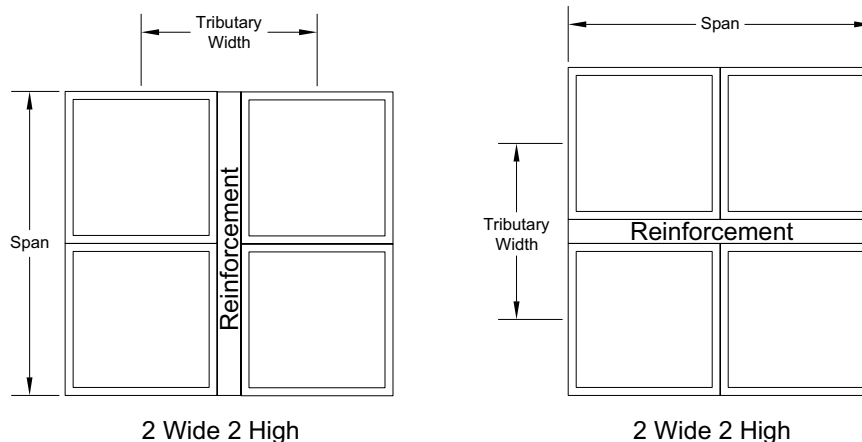
- Special considerations need to be made when installing mulled assemblies. Mullions create point loads that need to be transferred to the rough opening. For Marvin standard, MRF, LVL, and space mulls, the ends of the mull need to be fastened on each side of the splice with either jamb screws or brackets. Aluminum, steel and other structural mulls need to be anchored directly to the rough opening or building structure.

Tributary and Span:

Tributary Width - The area supported by the mullion. In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull.

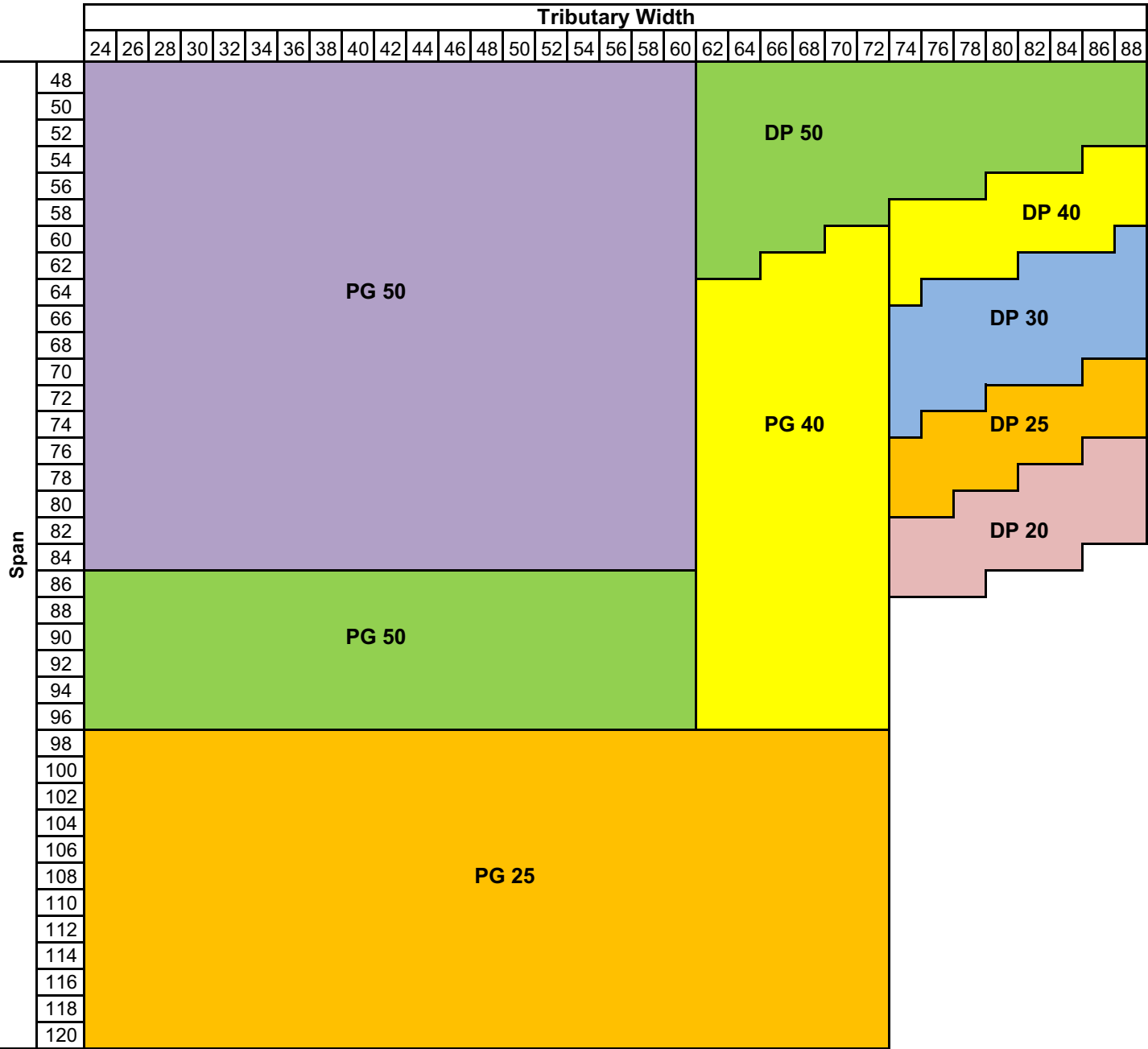
Span - The length of the mullion

Multi-Wide Multi-High Mull

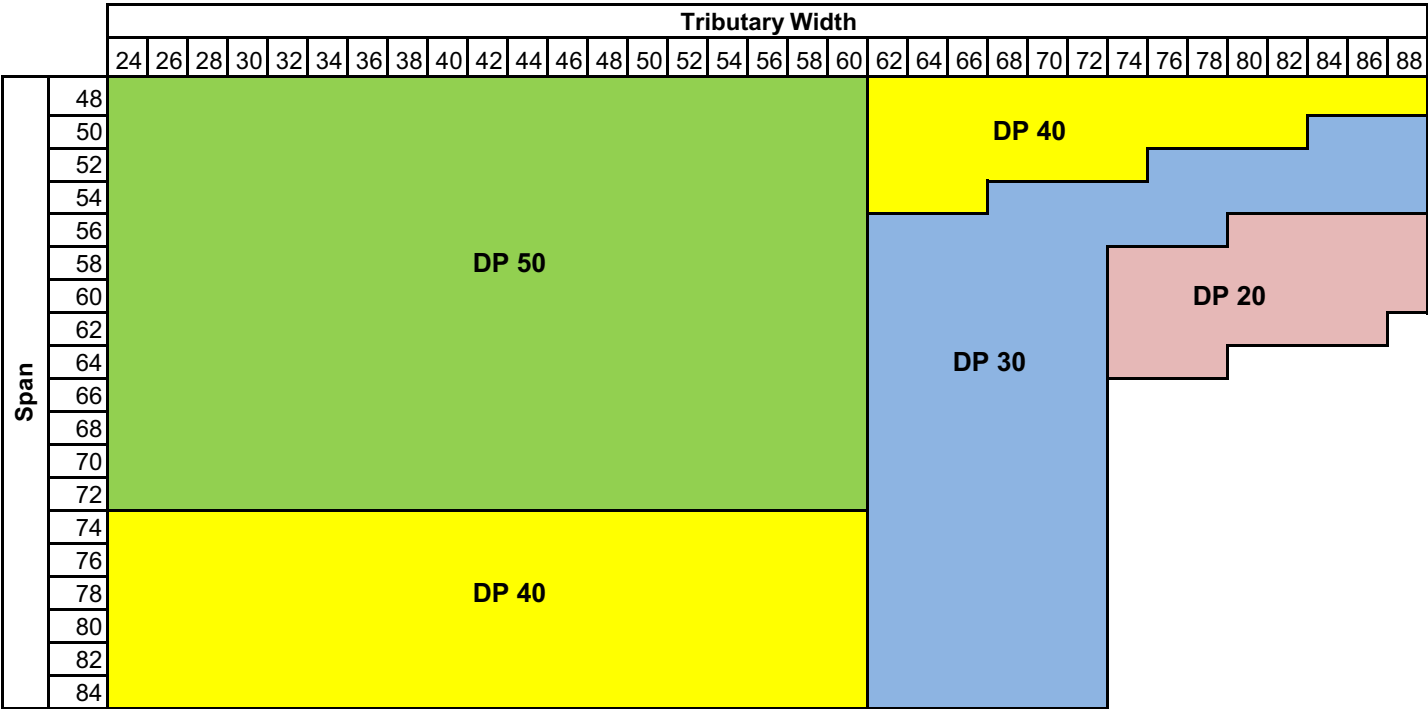


Multi-High Multi-Wide (Full Frame 3/8" Mull Reinforcement)

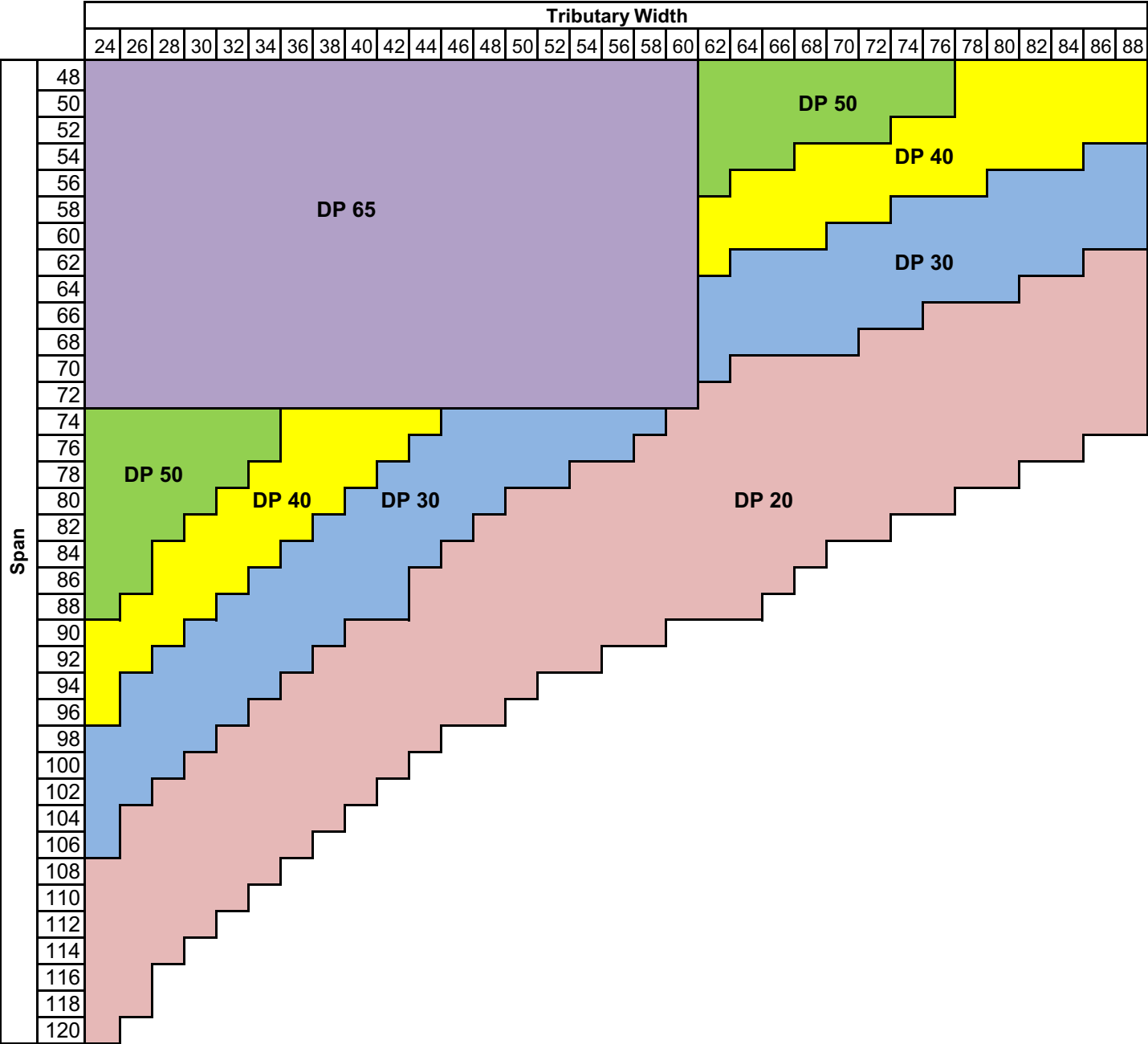
Mullion Performance Charts



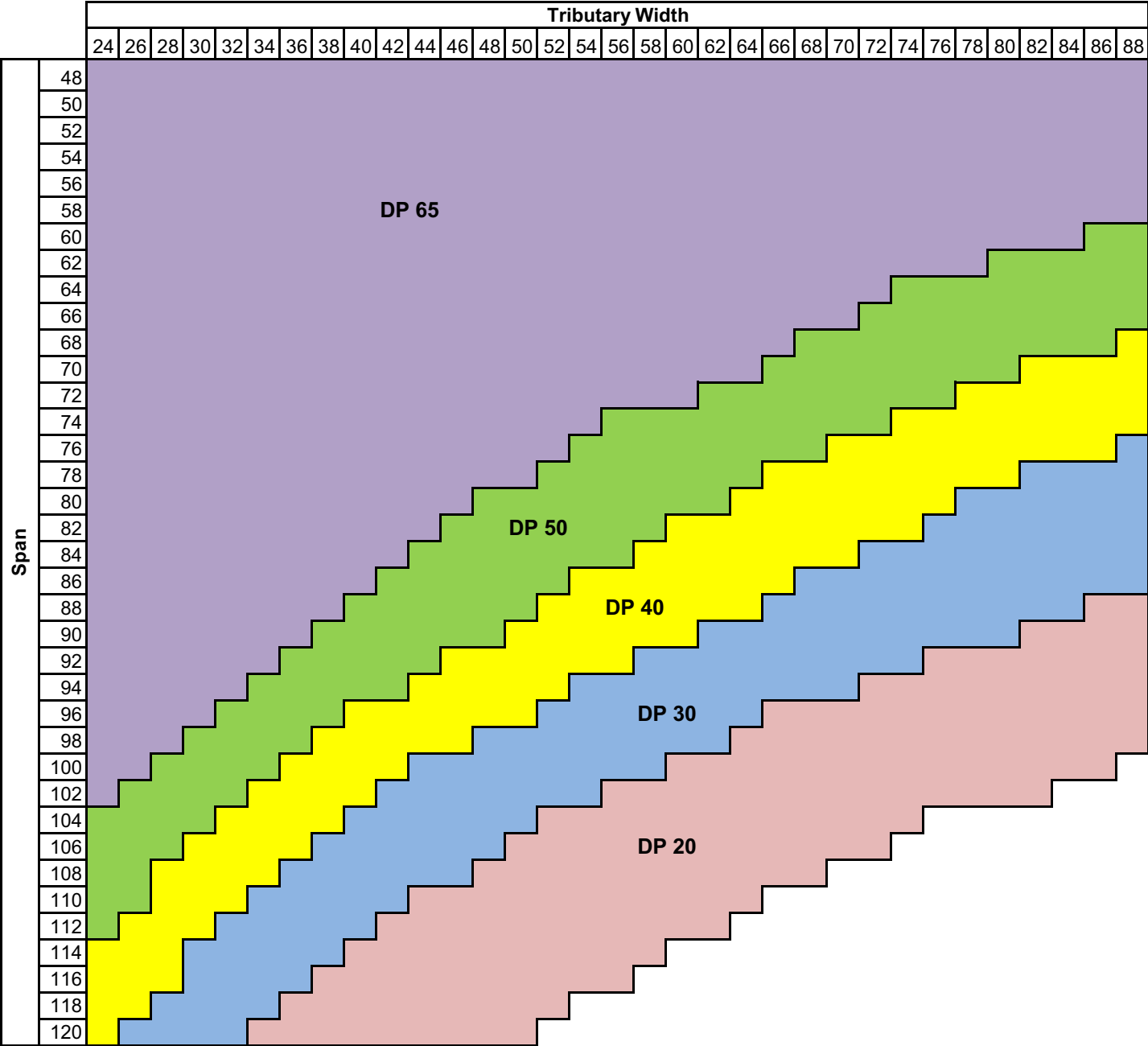
Multi-High Multi-Wide (Narrow Frame 3/8" Mull Reinforcement)



Multi-High Multi-Wide (Full Frame 1" LVL)



Multi-High Multi-Wide 2" LVL (4 9/16")



Ultimate Inswing French Door Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Inswing French Door product.

Mull Types:

- Standard Mull: Two units mulled directly together without any reinforcement or space mulls between the frames.
- 2" LVL Mull: Laminated Veneered Lumber is used as a solid space mull.

Products Included

- Ultimate Inswing French Door
- Ultimate Inswing French Door IZ3

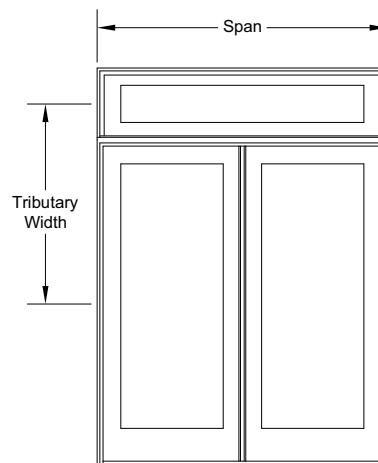
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

Tributary and Span:

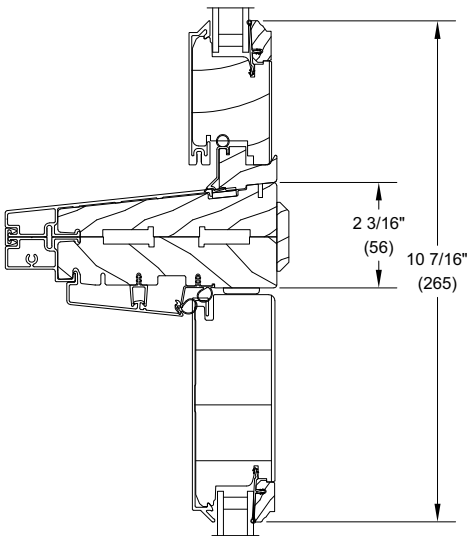
Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

Span - The length of the mullion.

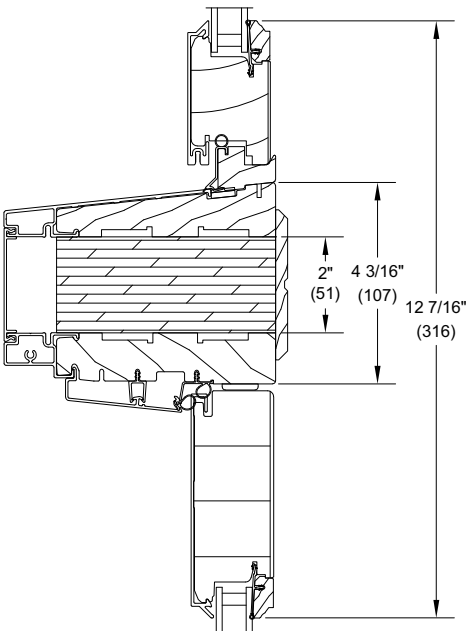


Section Details: Ultimate Inswing French Door Mulling Types

Ultimate Door Transom Over
Ultimate Inswing French Door

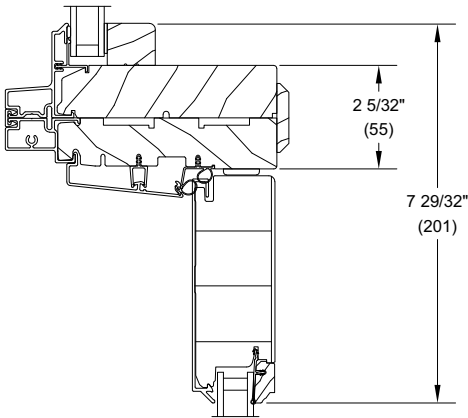


Standard

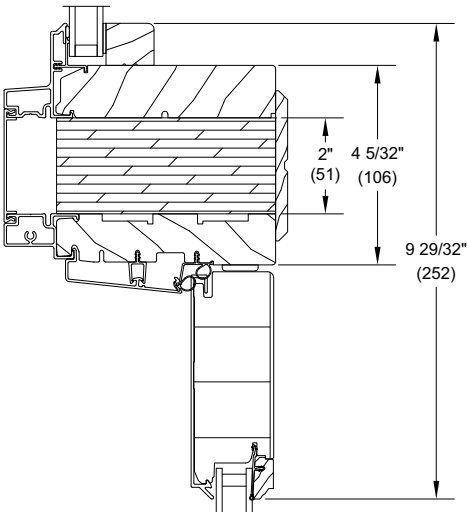


2" LVL

Ultimate Direct Glaze Over
Ultimate Inswing French Door



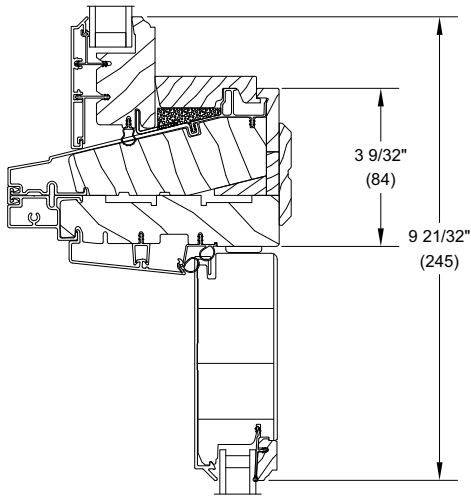
Standard



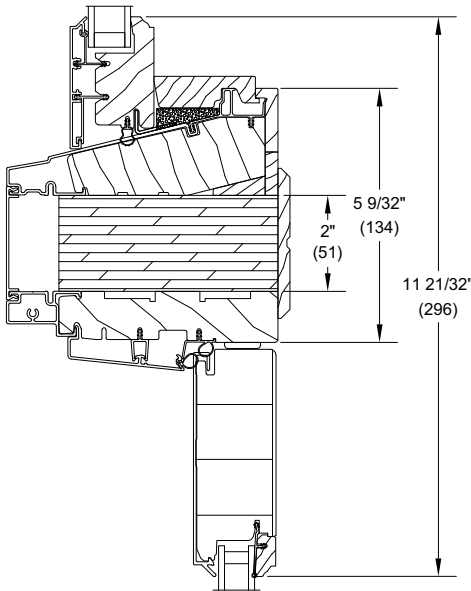
2" LVL

Section Details: Ultimate Inswing French Door Mulling Types (Continued)

Ultimate Double Hung G2 Transom Over
Ultimate Inswing French Door

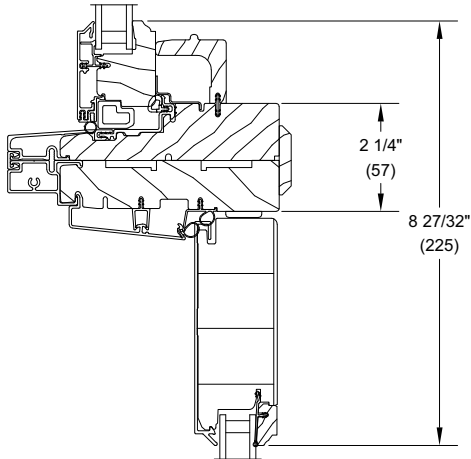


Standard

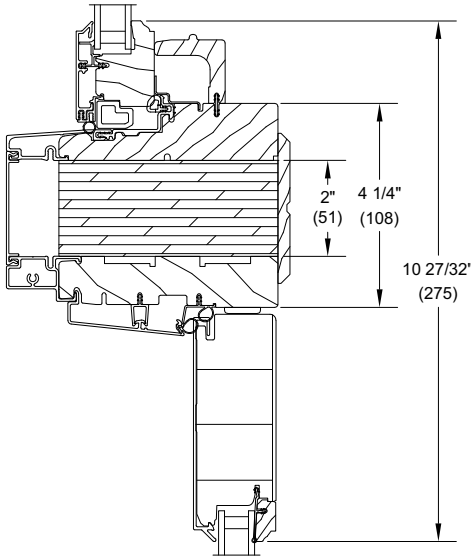


2" LVL

Ultimate Casement Picture Over
Ultimate Inswing French Door



Standard



2" LVL

Ultimate Inswing French Door Mulling - All Mull Types

		Tributary Width							
		48	50	52	54	56	58	60	62.75
Span	60.625	DP 50							
	72.625	PG 40							
	84.625								
	96.625	DP 30							
	110.719	DP 20							
	125.813								

NOTE: Includes UIFD with transoms of 1 frame and 1 sash (French Door Transoms, UDHG2 Transoms, Ultimate Direct Glaze Transoms or Ultimate Casement Transoms.

Ultimate Outswing French Door Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Outswing French Door product.

Mull Types:

- Standard Mull: Two units mulled directly together without any reinforcement or space mulls between the frames.
- 2" LVL Mull: Laminated Veneered Lumber is used as a solid space mull.

Products Included

- Ultimate Outswing French Door
- Ultimate Outswing French Door IZ3

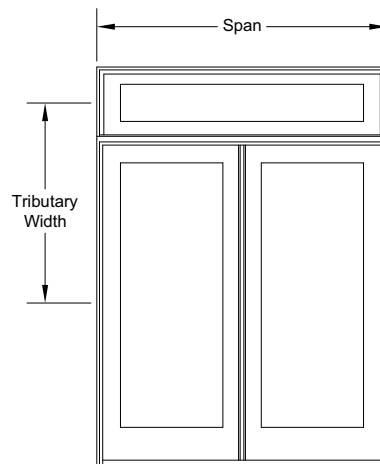
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

Tributary and Span:

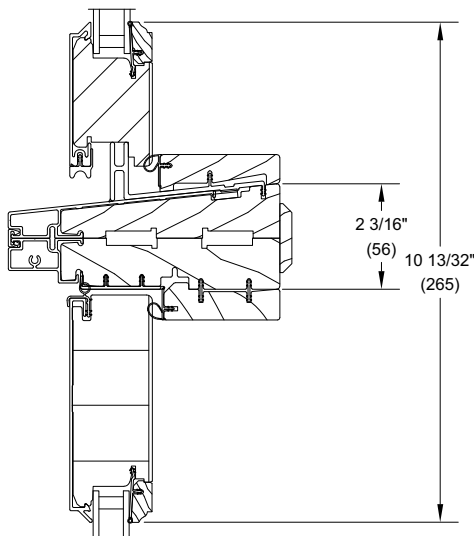
Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

Span - The length of the mullion.

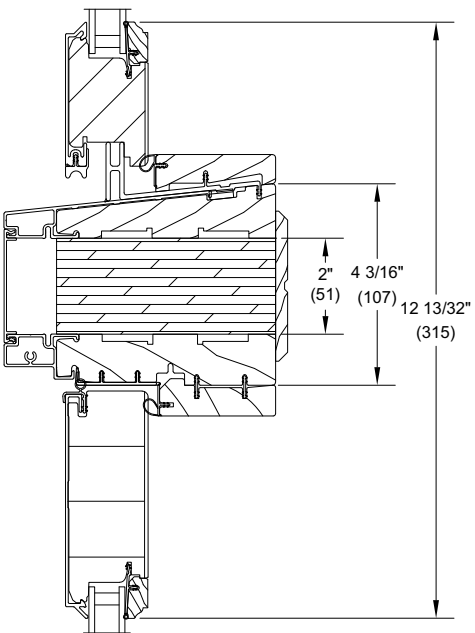


Section Details: Ultimate Outswing French Door Mulling Types

Ultimate Door Transom Over
Ultimate Outswing French Door

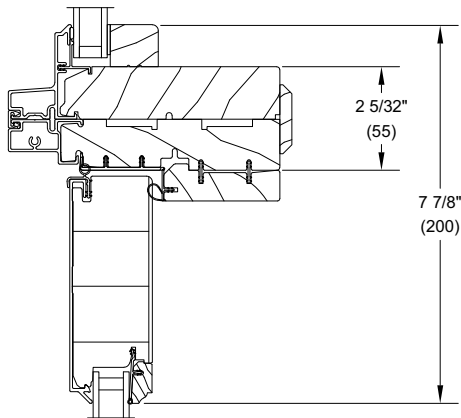


Standard

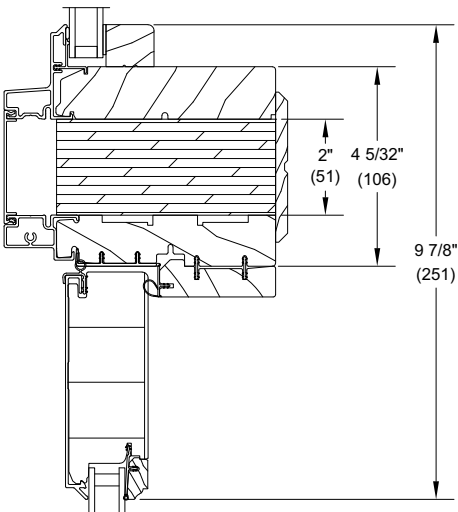


2" LVL

Ultimate Direct Glaze Over
Ultimate Outswing French Door



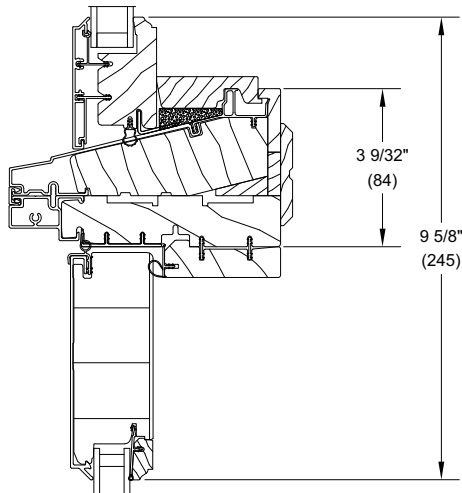
Standard



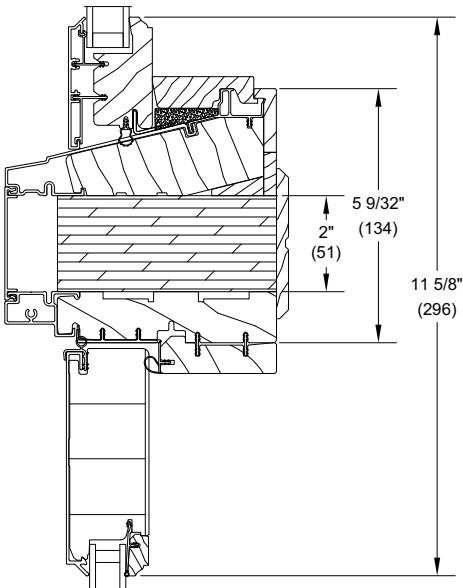
2" LVL

Section Details: Ultimate Outswing French Door Mulling Types (Continued)

Ultimate Double Hung G2 Transom Over
Ultimate Outswing French Door

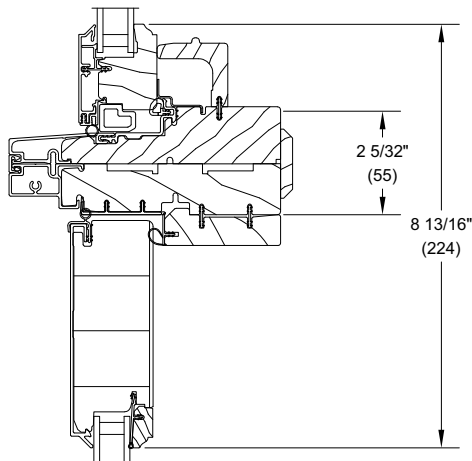


Standard

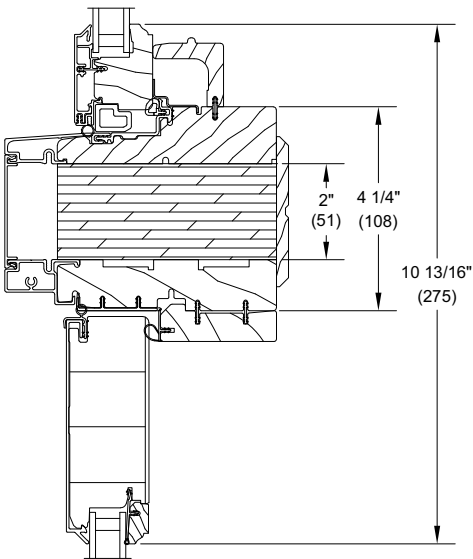


2" LVL

Ultimate Casement Picture Over
Ultimate Outswing French Door



Standard



2" LVL

Ultimate Outswing French Door Mulling - All Mull Types

		Tributary Width							
		48	50	52	54	56	58	60	62.75
Span	60.625	DP 50							
	72.625	PG 40							
	84.625								
	96.625	DP 30							
	110.719	DP 20							
	125.813								

NOTE: Includes UOFD with transoms of 1 frame and 1 sash (French Door Transoms, UDHG2 Transoms, Ultimte Direct Glaze Transoms or Ultimate Casement Transoms.

Ultimate Sliding French Door Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Sliding French Door product.

Mull Types:

- Standard Mull: Two units mulled directly together without any reinforcement or space mulls between the frames.
- 2" LVL Mull: Laminated Veneered Lumber is used as a solid space mull.

Products Included

- Ultimate Sliding French Door
- Ultimate Sliding French Door IZ3

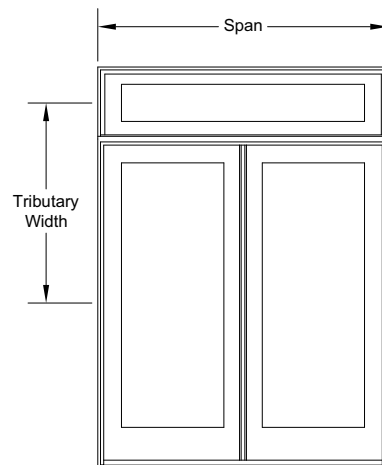
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

Tributary and Span:

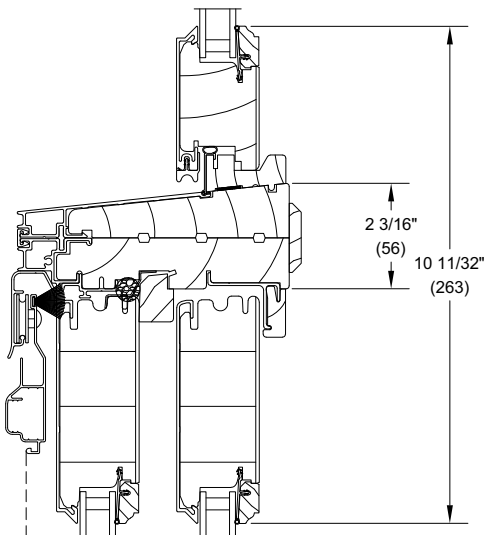
Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

Span - The length of the mullion.

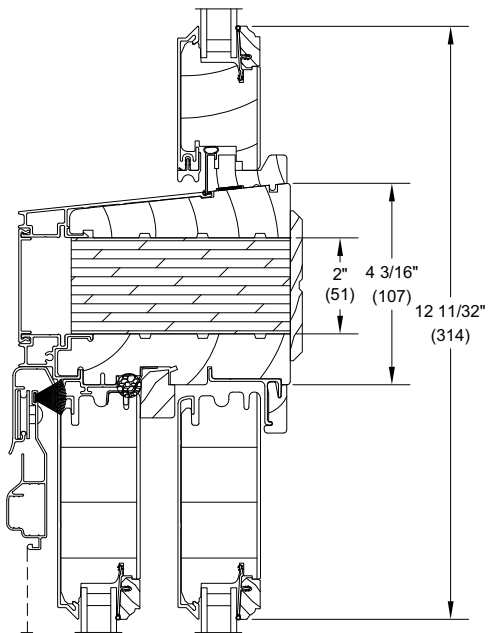


Section Details: Ultimate Sliding French Door Mulling Types

Ultimate Door Transom Over
Ultimate Sliding French Door

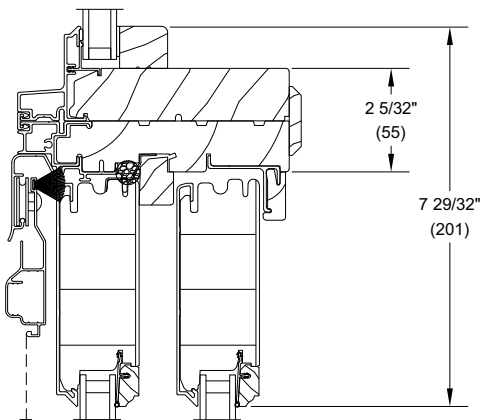


Standard

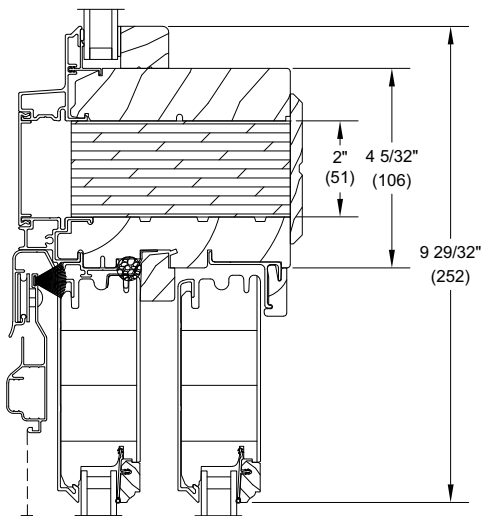


2" LVL

Ultimate Direct Glaze Over
Ultimate Sliding French Door



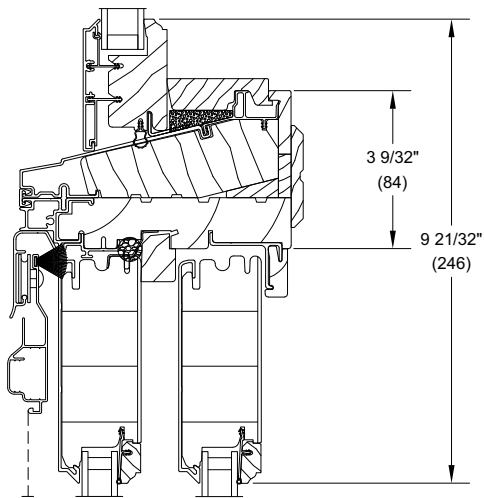
Standard



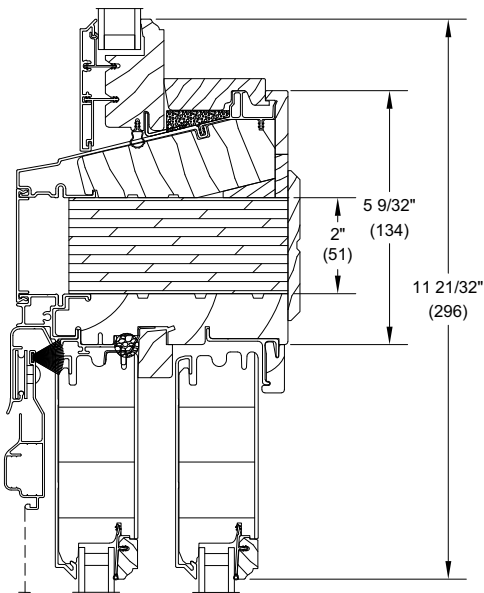
2" LVL

Section Details: Ultimate Sliding French Door Mulling Types (Continued)

Ultimate Double Hung G2 Transom Over
Ultimate Sliding French Door

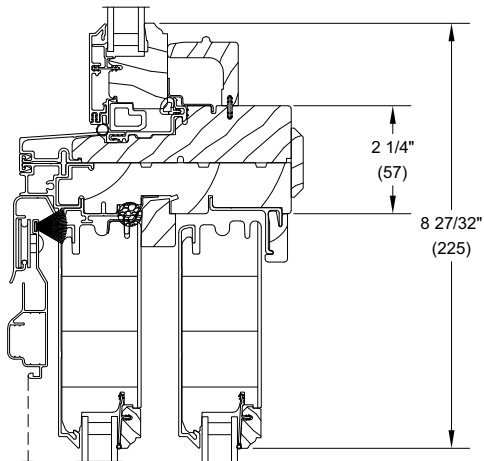


Standard

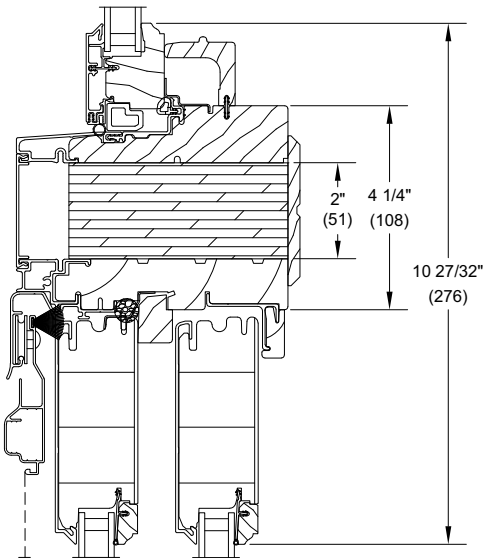


2" LVL

Ultimate Casement Picture Over
Ultimate Sliding French Door



Standard



2" LVL

Ultimate Sliding French Door Mulling - All Mull Types

		Tributary Width							
		48	50	52	54	56	58	60	62.75
Span	60.625	DP 50							
	72.625	PG 40							
	84.625								
	96.625	DP 30							
	110.719	DP 20							
	125.813								

NOTE: Includes USFD with transoms of 1 frame and 1 sash (French Door Transoms, UDHG2 Transoms, Ultimate Direct Glaze Transoms or Ultimate Casement Transoms).

Ultimate Sliding Patio Door Mull Types

Marvin offers a variety of mull options for many of the Marvin window and door projects. This document is a compilation of mulling options for the Ultimate Sliding Patio Door product.

Mull Types:

- Standard Mull: Two units mulled directly together without any reinforcement or space mulls between the frames.
- 2" LVL Mull: Laminated Veneered Lumber is used as a solid space mull.

Products Included

- Ultimate Sliding Patio Door

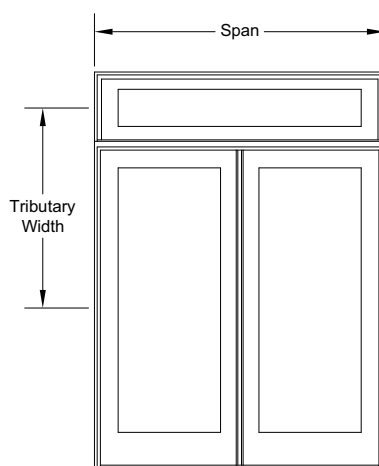
Certified Mull Installation Methods

- Masonry Clips
- Jamb Screws
- Structural Brackets

Tributary and Span:

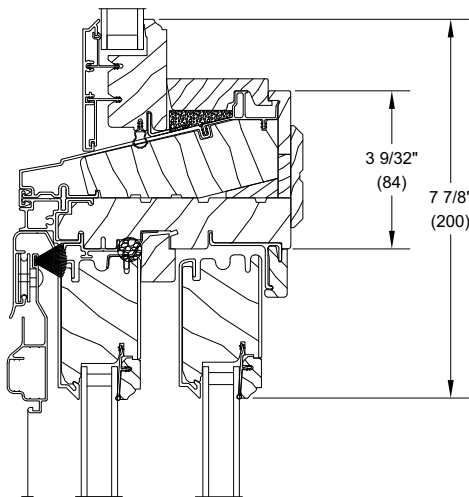
Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In the case of a horizontal mull, this is equal to the sum of half of the height of each unit on each side of the mull.

Span - The length of the mullion.

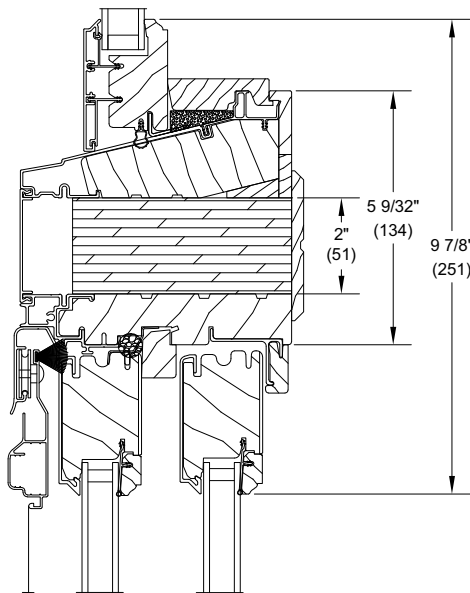


Section Details: Ultimate Sliding Patio Door Mulling Types

Ultimate Double Hung G2 Transom Over
Ultimate Sliding Patio Door

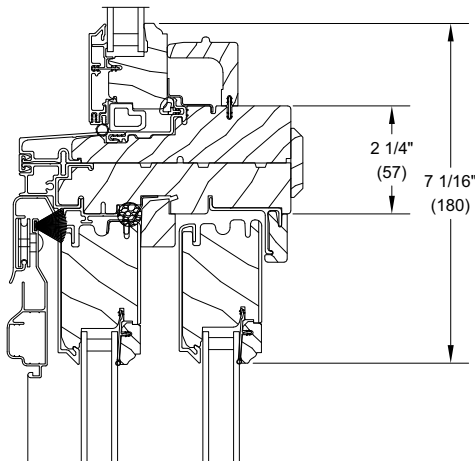


Standard

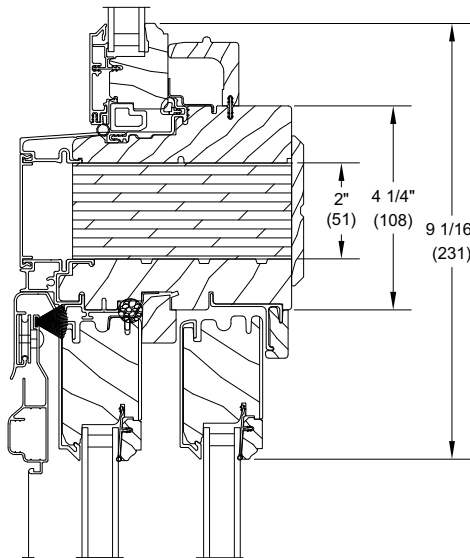


2" LVL

Ultimate Casement Picture Over
Ultimate Sliding Patio Door



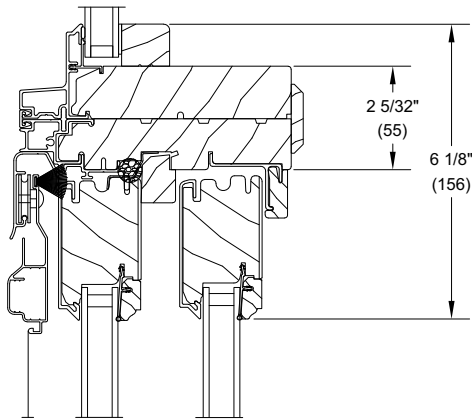
Standard



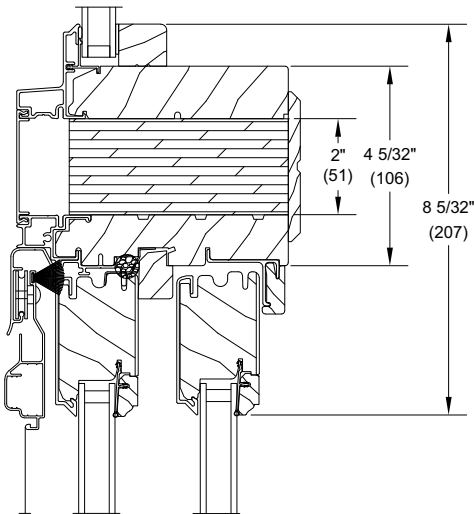
2" LVL

Section Details: Ultimate Sliding Patio Door Mulling Types (Continued)

Ultimate Direct Glaze Over
Ultimate Sliding Patio Door



Standard



2" LVL

Ultimate Sliding Patio Door Mulling - All Mull Types

		Tributary Width							
		48	50	52	54	56	58	60	62.75
Span	60.625	DP 50							
	72.625	PG 40							
	84.625								
	96.625	DP 30							
	110.719	DP 20							
	125.813								

NOTE: Includes USPD with transoms of 1 frame and 1 sash (French Door Transoms, UDHG2 Transoms, Ultimate Direct Glaze Transoms or Ultimate Casement Transoms.

Modern Casement Mull Types

This document is a compilation of mulling options for the Modern Casement and Awning products.

Mull Types:

- Standard Mull: 2 or more units mulled directly together with the standard 1/2" x 2 1/4" Aluminum; requires standard interior and exterior mull covers.
- 1/2" x 2 1/2" Steel: 2 or more units mulled directly together with 1/2" x 2 1/2" Flat steel; requires standard interior and exterior mull covers.
- 1/2" x 4" Steel: 2 or more units mulled directly together with 1/2" x 4" Flat steel; requires standard exterior and 4" interior mull cover.
- 2" x 4" Tube Steel: 2 or more units mulled together with 2" x 4" Tube steel creates a 1 1/2" space between the units requiring different interior and exterior covers.
- 4 1/2" Stud Pocket: Exterior and interior covers to spread the units 4 1/2" apart.

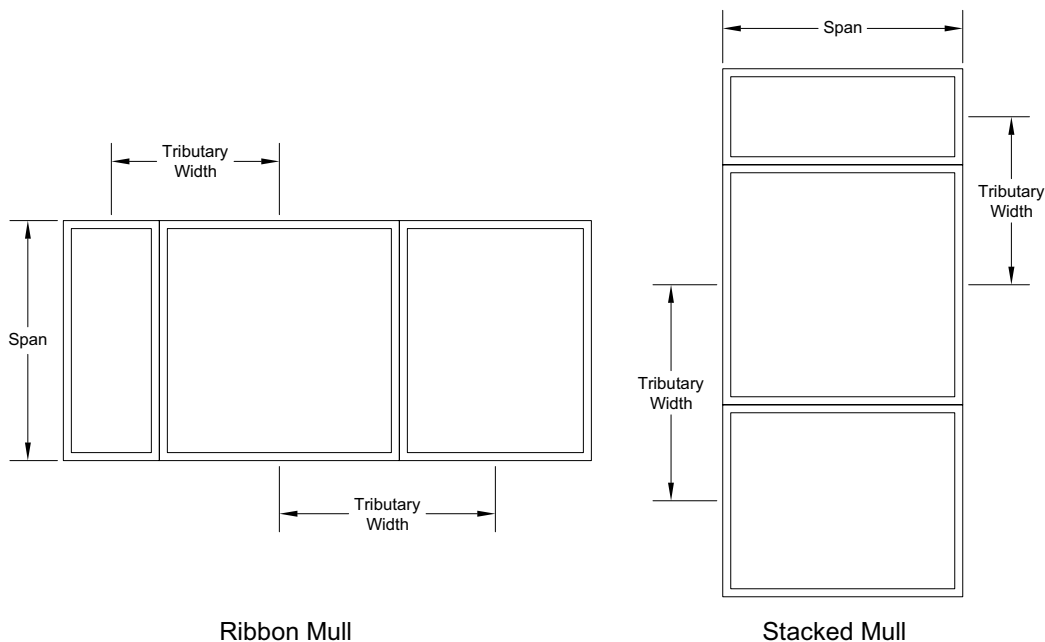
NOTE: Aluminum mull supplied by Marvin. All other structure is supplied by others.

Products Included

- Modern Casement Crank Out
- Modern Casement Push Out
- Modern Awning Crank Out
- Modern Awning Push Out

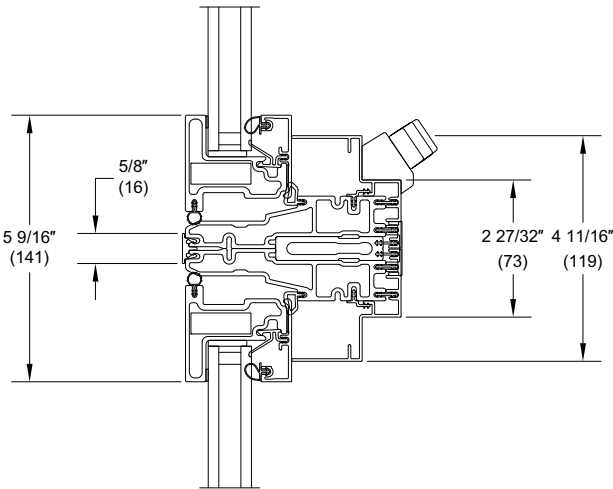
Certified Mull Installation Methods

- Jamb Screws

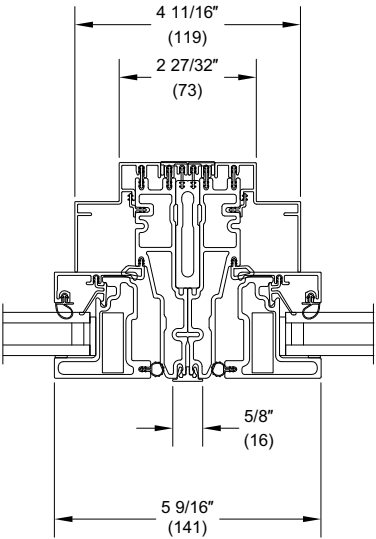


Section Details: Modern Casement/Awning Standard Mulling Types

15/16" Dual Pane Glass

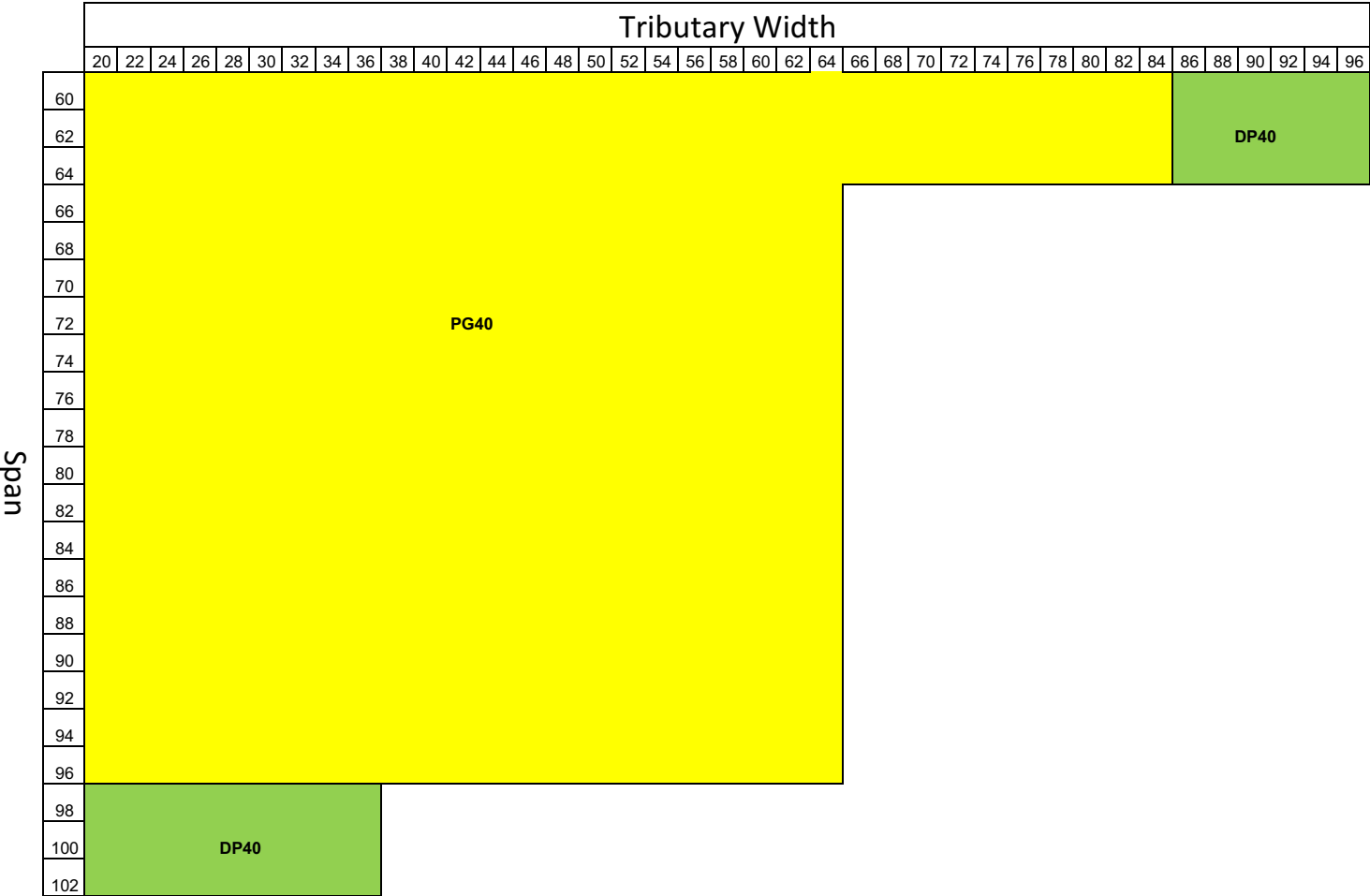


Head Jamb and Sill

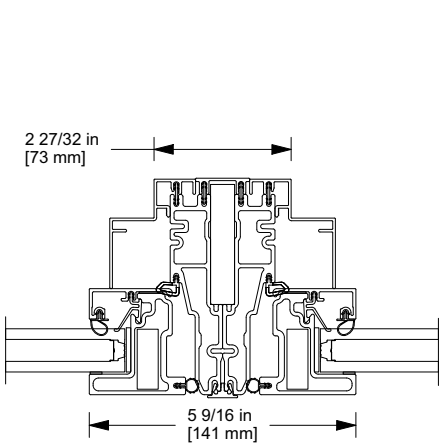


Jambs

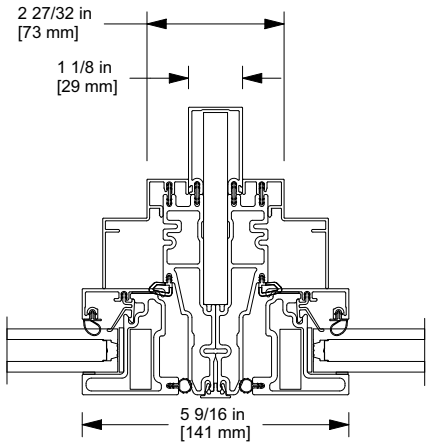
Section Details: Modern Casement/Awning Standard Mulling Types



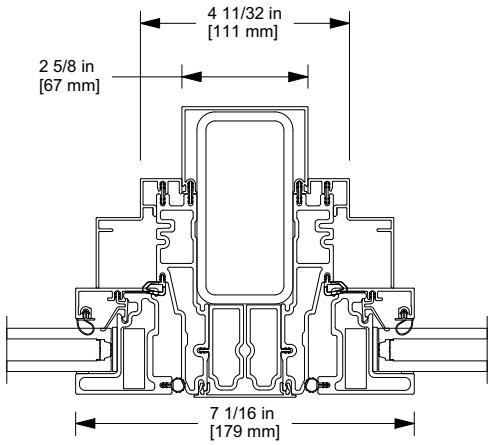
Modern Casement Additional Mulling Options (Ribbon or Stacked Assembly)



2 1/2 in Flat Steel



4 in Flat Steel



2 in x 4 in Tube Steel

Modern Direct Glaze Mull Types

This document is a compilation of mulling options for the Modern Direct Glaze product.

Mull Types:

- Standard Mull: 2 or more units mulled directly together with the standard 1/2" x 2 1/4" Aluminum; requires standard interior and exterior mull covers.
- 1/2" x 2 1/2" Steel: 2 or more units mulled directly together with 1/2" x 2 1/2" Flat steel; requires standard interior and exterior mull covers.
- 1/2" x 4" Steel: 2 or more units mulled directly together with 1/2" x 4" Flat steel; requires standard exterior and 4" interior mull cover.
- 2" x 4" Tube Steel: 2 or more units mulled together with 2" x 4" Tube steel creates a 1 1/2" space between the units requiring different interior and exterior covers.
- 4 1/2" Stud Pocket: Exterior and interior covers to spread the units 4 1/2" apart.

NOTE: Aluminum mull supplied by Marvin. All other structure is supplied by others.

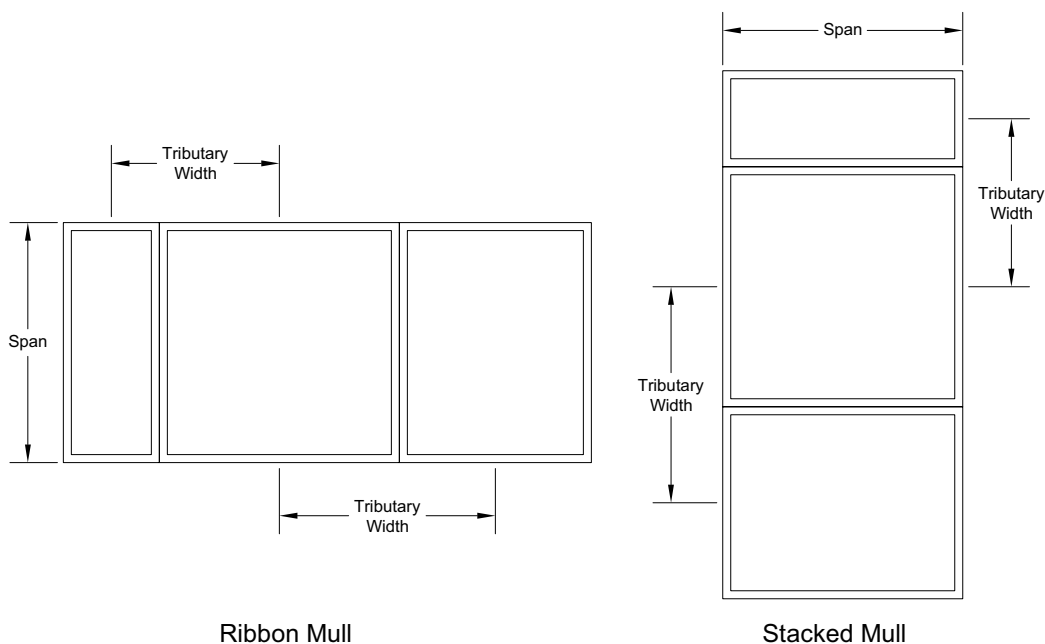
Products Included

- Modern Direct Glaze Polygon
- Modern Direct Glaze Rectangle

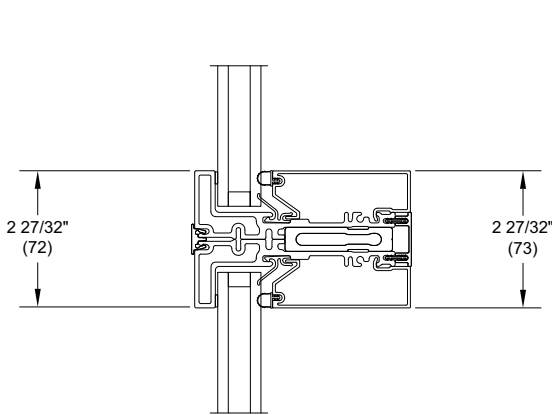
Certified Mull Installation Methods

- Jamb Screws

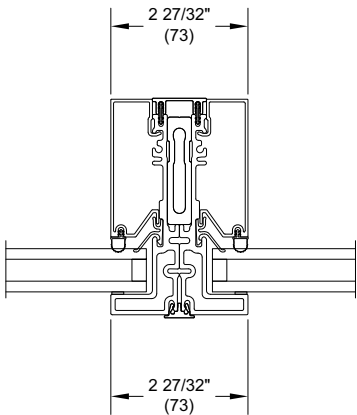
Tributary and Span:



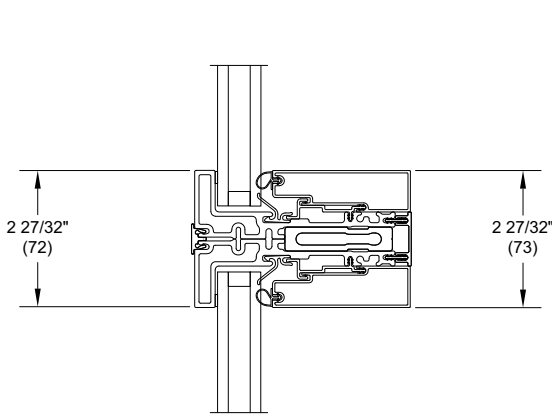
Section Details: Modern Direct Glaze Standard Mulling Types



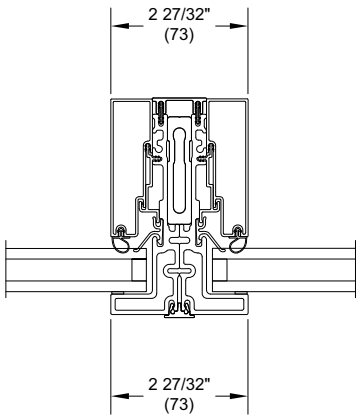
Direct Glaze Rectangle
Head Jamb and Sill



Direct Glaze Rectangle
Jambs

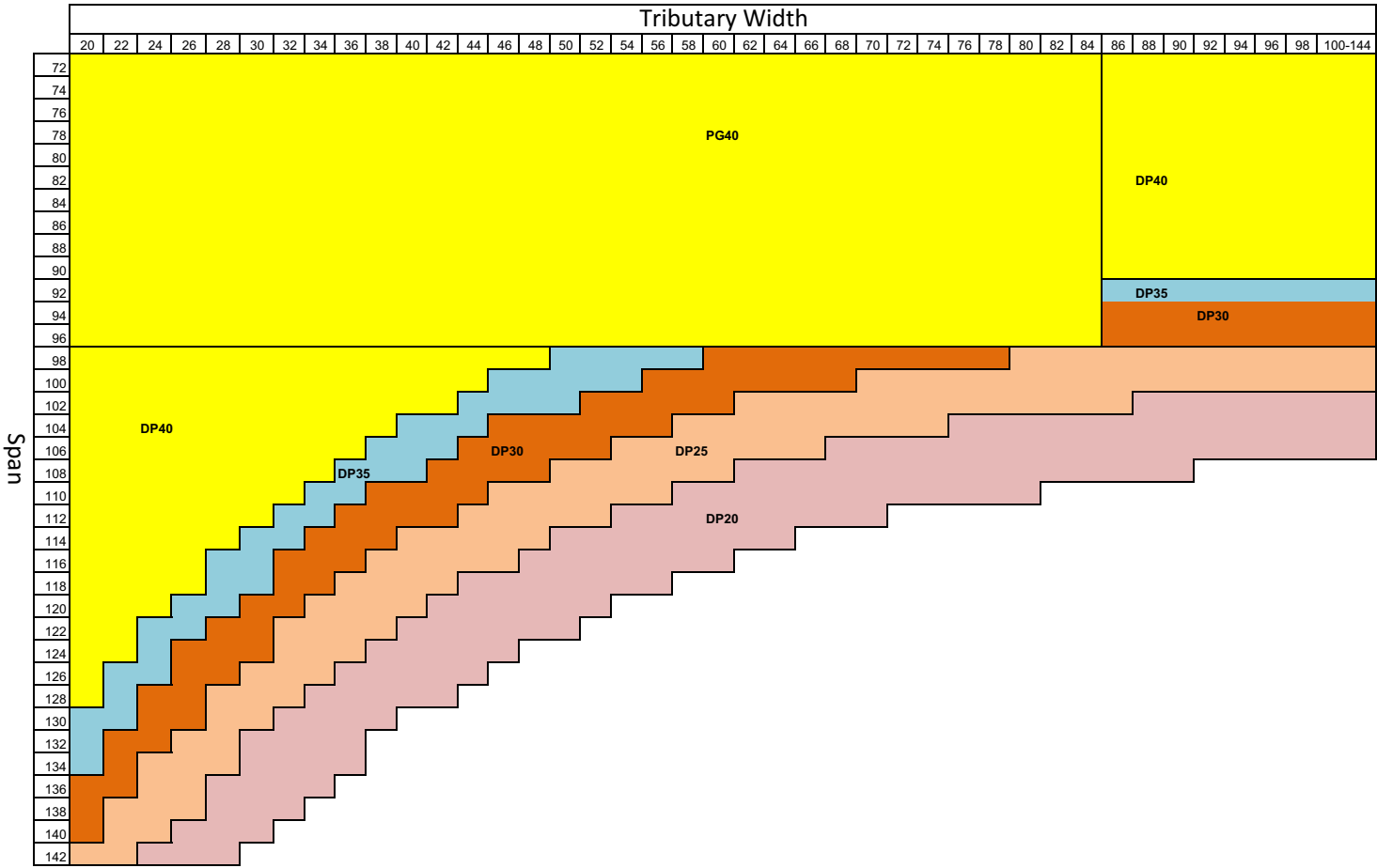


Direct Glaze - Polygon
Head Jamb and Sill



Direct Glaze Polygon
Jambs

Modern Direct Glaze Mulling - Standard Mull (Ribbon or Stacked Assembly)



Modern Swinging Doors Mull Types

This document is a compilation of mulling options for the Modern Inswing and Outswing Door products.

Mull Types:

- Standard Mull: 2 or more units mulled directly together with the standard 1/2" x 2 1/4" Aluminum; requires standard interior and exterior mull covers.
- 1/2" x 2 1/2" Steel: 2 or more units mulled directly together with 1/2" x 2 1/2" Flat steel; requires standard interior and exterior mull covers.
- 1/2" x 4" Steel: 2 or more units mulled directly together with 1/2" x 4" Flat steel; requires standard exterior and 4" interior mull cover.
- 2" x 4" Tube Steel: 2 or more units mulled together with 2" x 4" Tube steel creates a 1 1/2" space between the units requiring different interior and exterior covers.
- 4 1/2" Stud Pocket: Exterior and interior covers to spread the units 4 1/2" apart.

NOTE: Aluminum mull supplied by Marvin. All other structure is supplied by others.

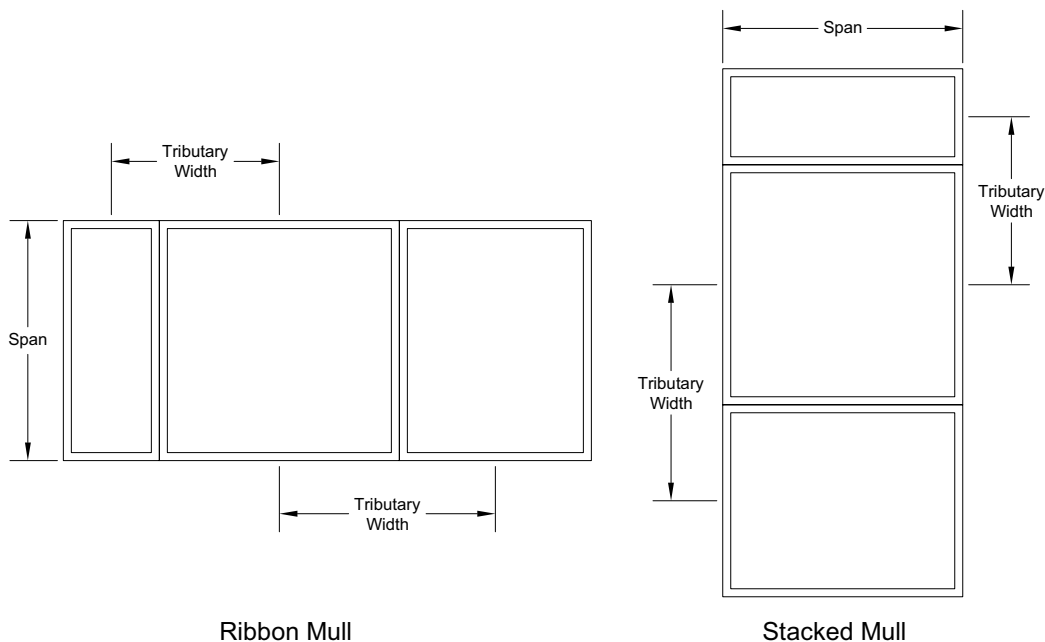
Products Included

- Modern Inswing Door
- Modern Outswing Door

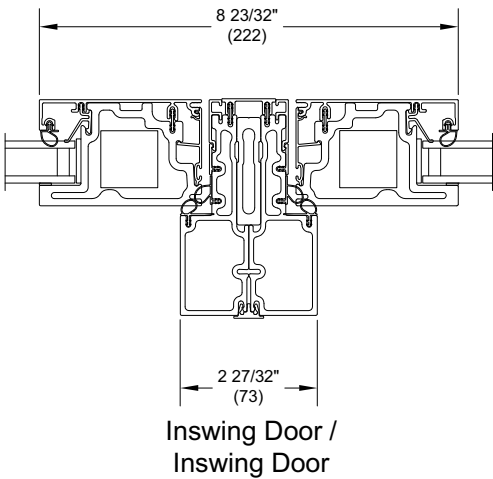
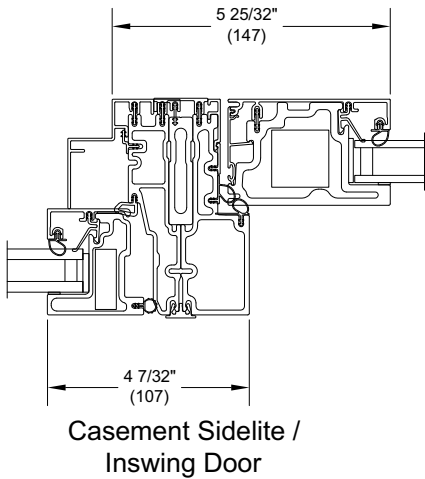
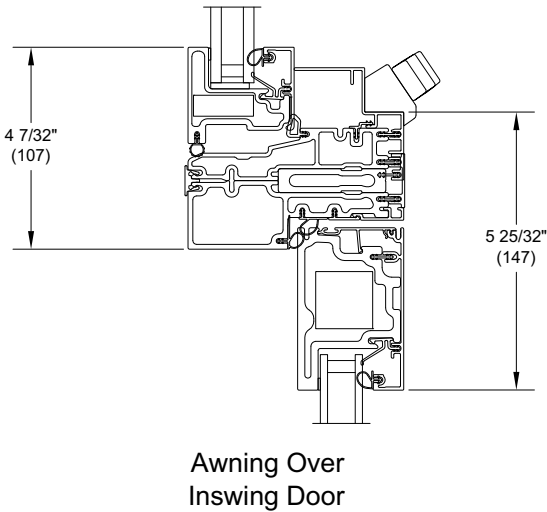
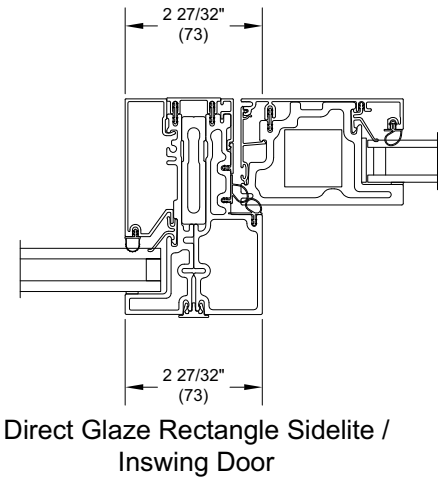
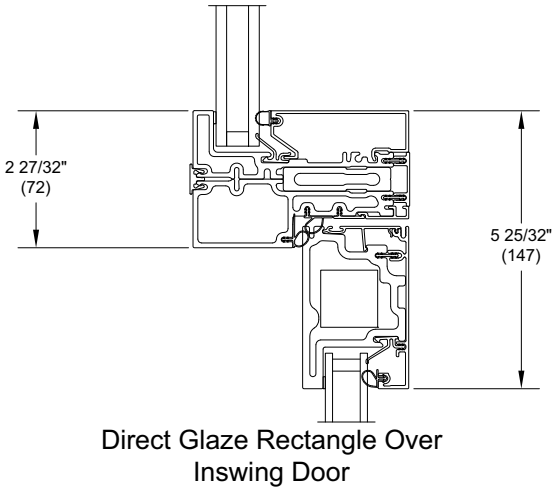
Certified Mull Installation Methods

- Jamb Screws

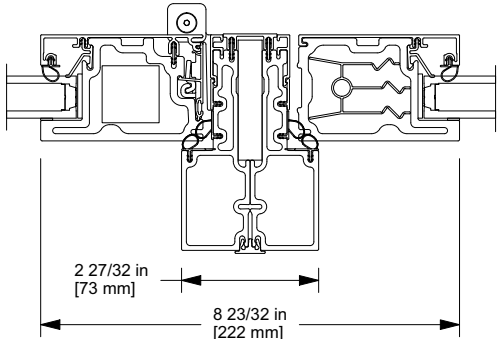
Tributary and Span:



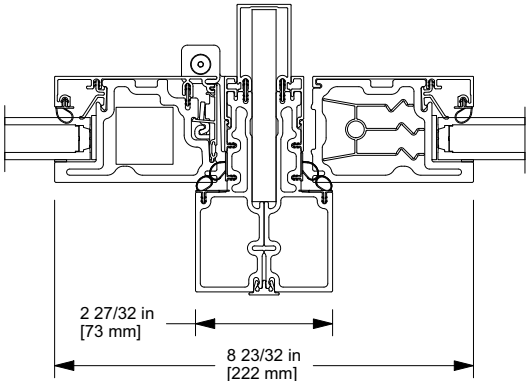
Section Details: Modern Inswing Door Standard Mulling Types



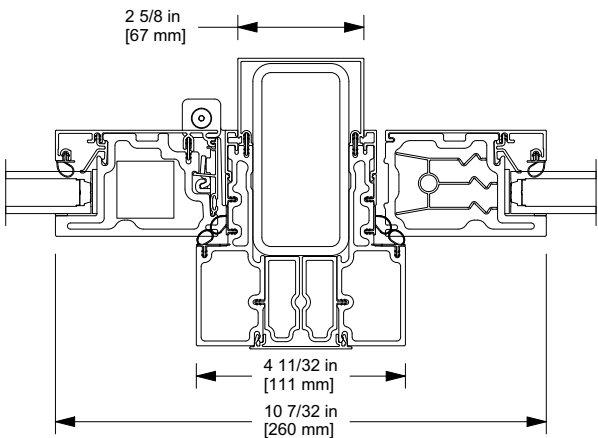
Section Details: Modern Inswing Door Standard Mulling Types



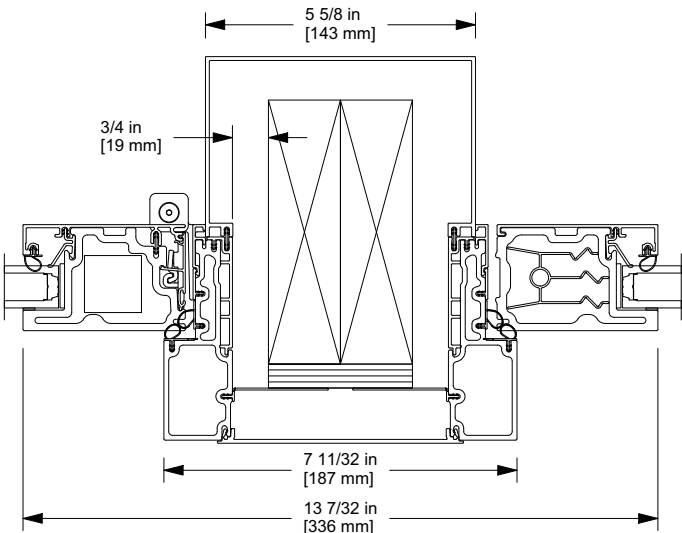
2 1/2 in Flat Steel



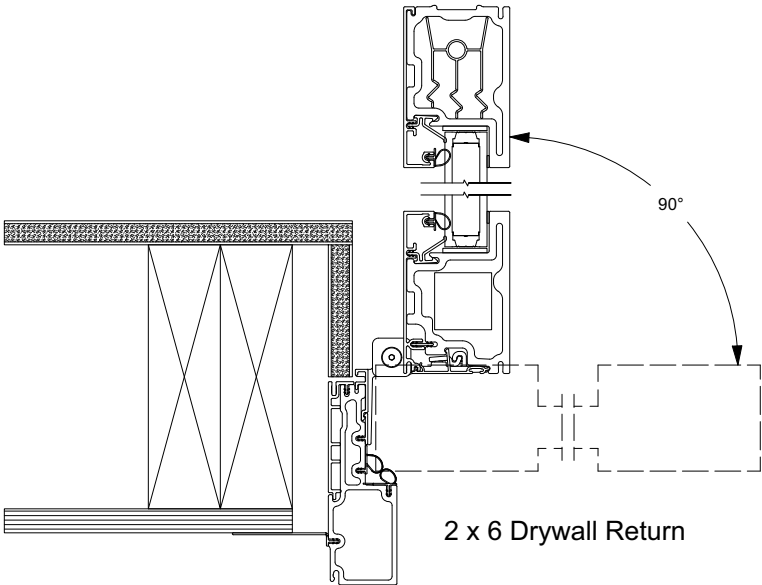
4 in Flat Steel



2 in x 4 in Tube Steel



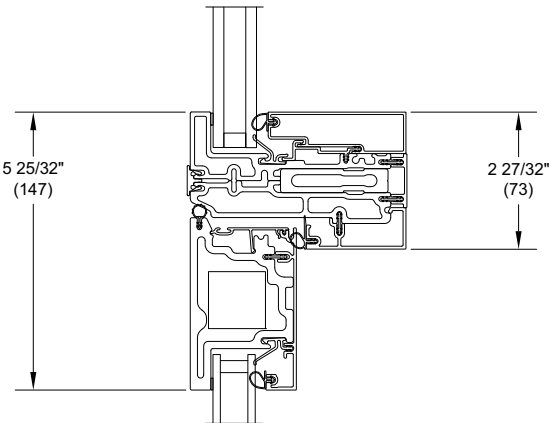
4 1/2 in Stud Pocket



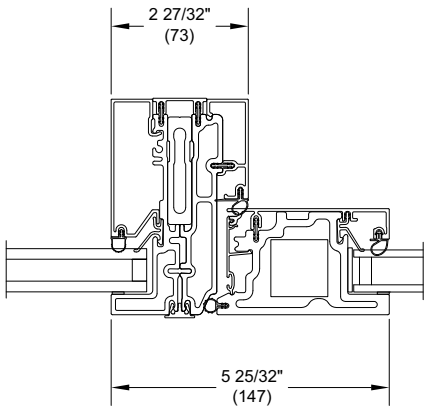
2 x 6 Drywall Return

* On Inswing Doors, range of operation and Net Clear Opening may be limited by interior mull covers and wall detail.

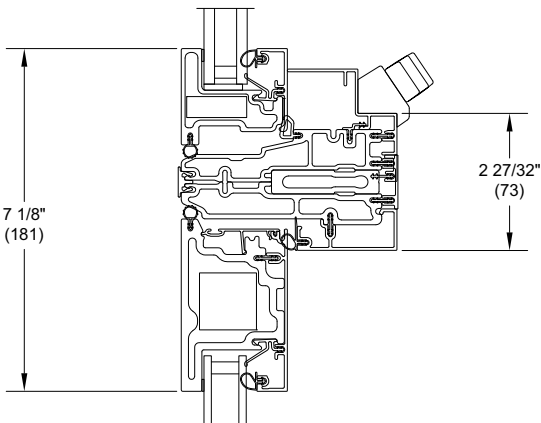
Section Details: Modern Outswing Door Standard Mulling Types



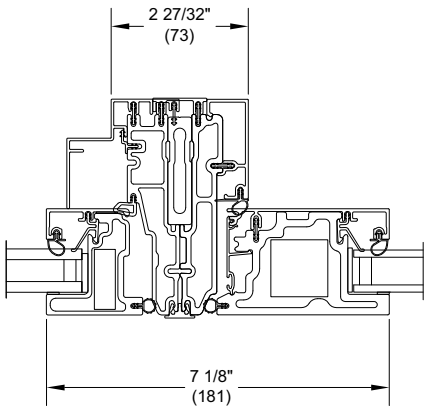
Direct Glaze Rectangle Over Outswing Door



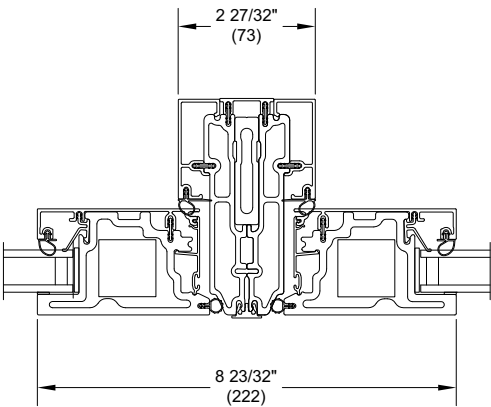
Direct Glaze Rectangle Sidelite / Outswing Door



Awning Over Outswing Door

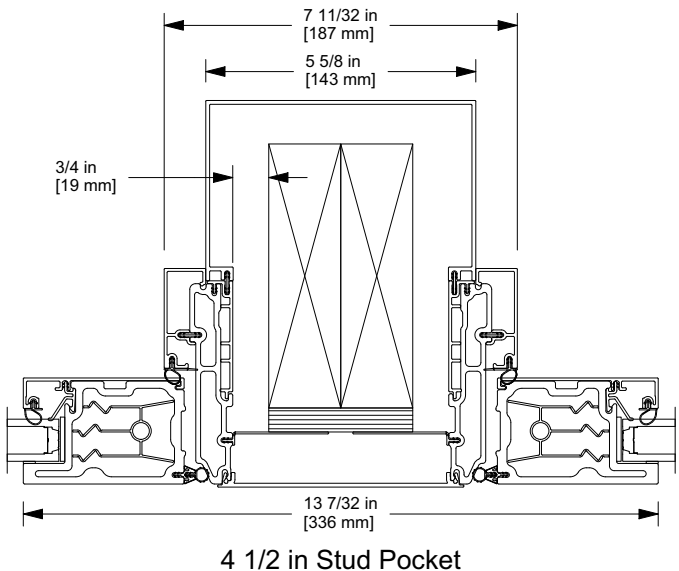
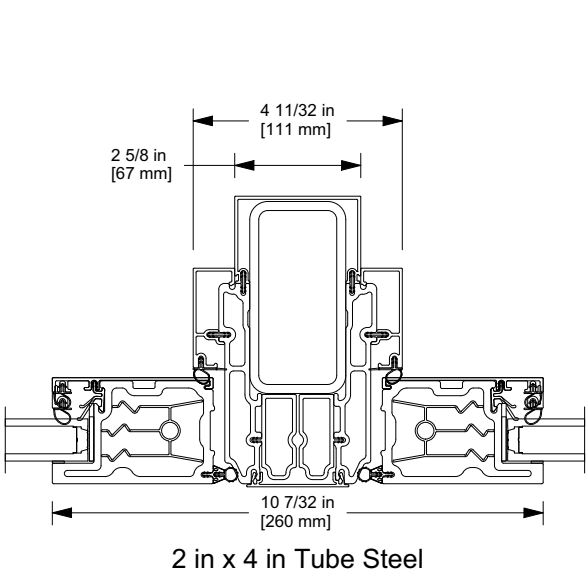
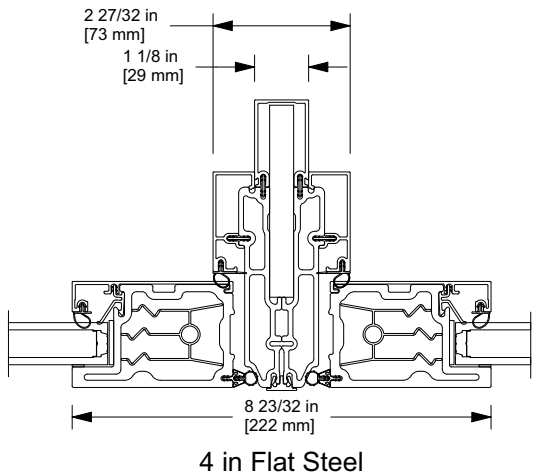
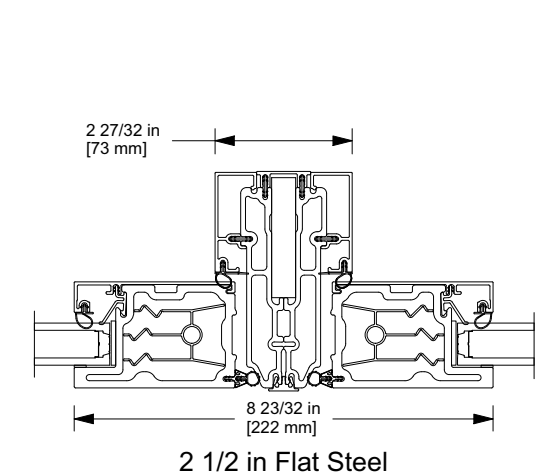


Casement Sidelite / Outswing Door

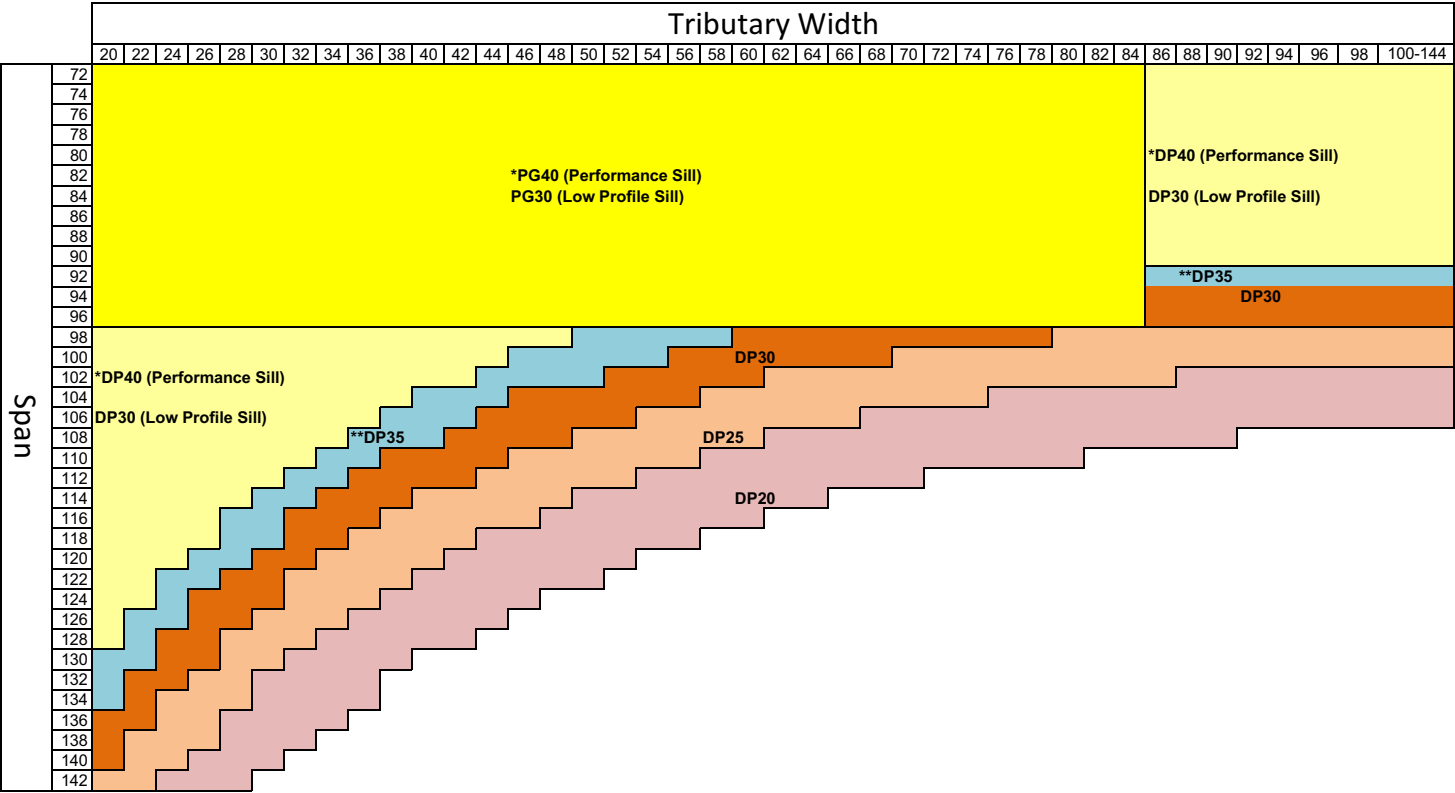


Outswing / Outswing Door Jamb

Section Details: Modern Outswing Door Standard Mulling Types



Modern Swinging Doors Mulling - Standard Mull (Ribbon or Stacked Assembly)



* Inswing XX stacked mull excluded as it only meets PG30.
** Inswing XX stacked mull with performance sill excluded as it only meets DP30.

Modern Additional Steel Mull Types

This document is a compilation of additional steel mulling options for the Modern window products.

Mull Types:

- 1/2" x 2 1/2" Steel: 2 or more units mulled directly together with 1/2" x 2 1/2" Flat steel; requires standard interior and exterior mull covers.
- 1/2" x 4" Steel: 2 or more units mulled directly together with 1/2" x 4" Flat steel; requires standard exterior and 4" interior mull cover.
- 2" x 4" Tube Steel: 2 or more units mulled together with 2" x 4" Tube steel creates a 1 1/2" space between the units requiring different interior and exterior covers.
- 4 1/2" Stud Pocket: Exterior and interior covers to spread the units 4 1/2" apart.

NOTE: Aluminum mull supplied by Marvin. All other structure is supplied by others.

Products Included

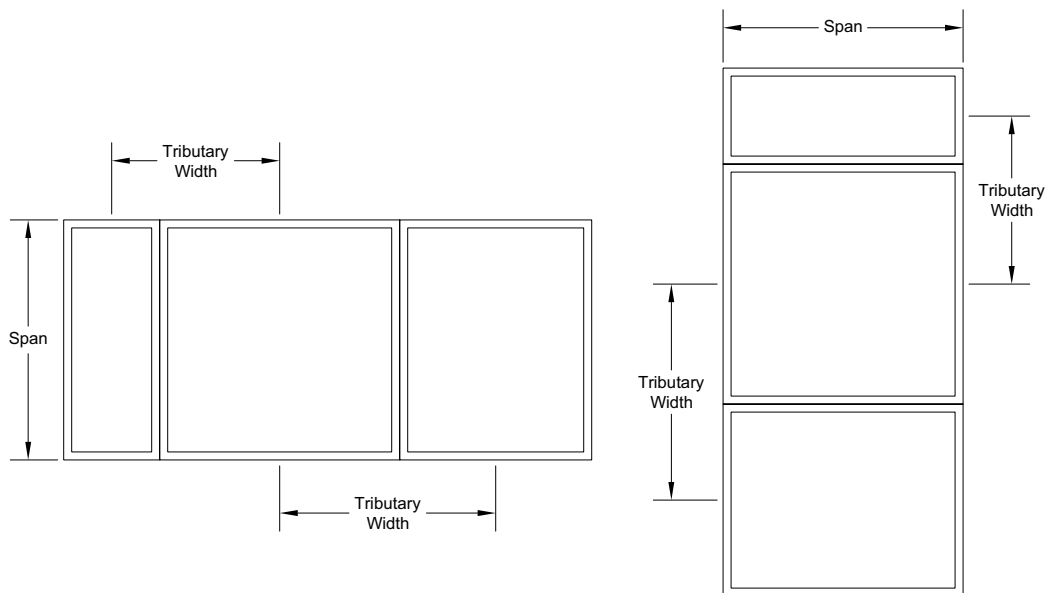
- Modern Casement
- Modern Direct Glaze Polygon
- Modern Direct Glaze Rectangle

Certified Mull Installation Methods

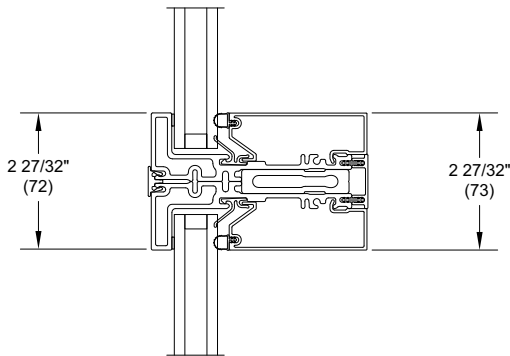
- Jamb Screws

Tributary and Span:

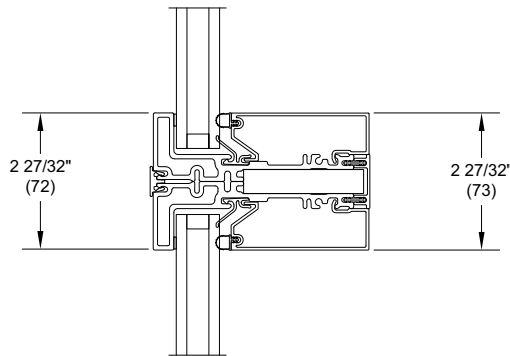
Tributary Width - In the case of a vertical mull, this is equal to the sum of half of the width of each unit on each side of the mull. In



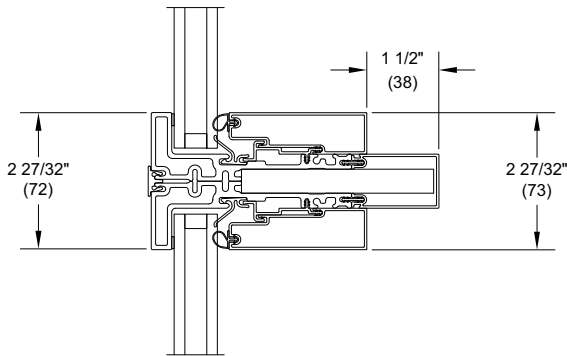
Section Details: Modern Additional Steel Mulling Types



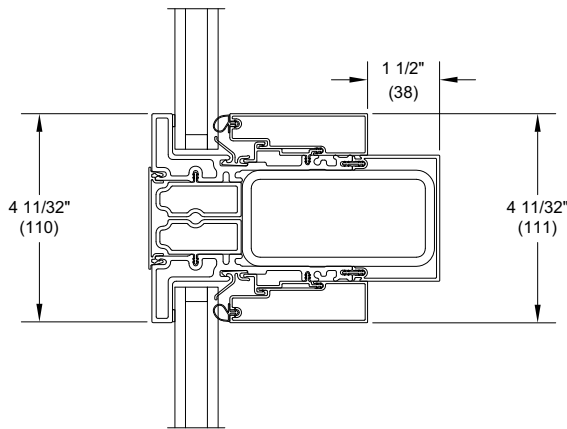
1/2" X 2 1/4" Aluminum Mull



1/2" X 2 1/2" Flat Steel Mull



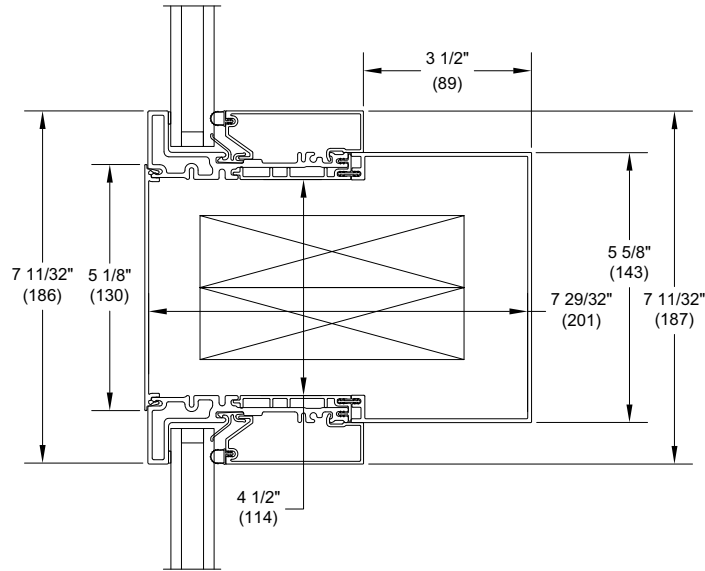
1/2" X 4" Flat Steel Mull



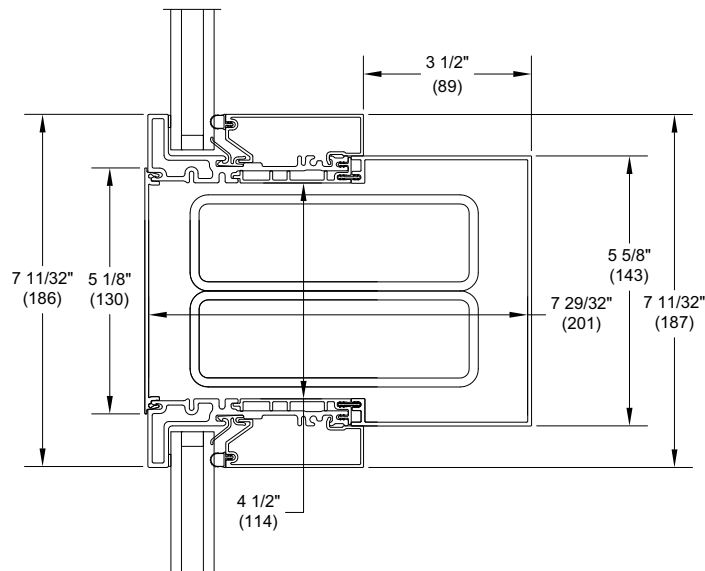
2" X 4" Tube Steel Mull

*NOTE: Mull Certification includes Direct Glaze, Casement/Awning, Inswing and Outswing door products.
Tributary spans are limited based on individual maximum unit size
Standard Aluminum Mull provided by Marvin. All other structure supplied by others.*

Section Details: Modern Additional Steel Mulling Types



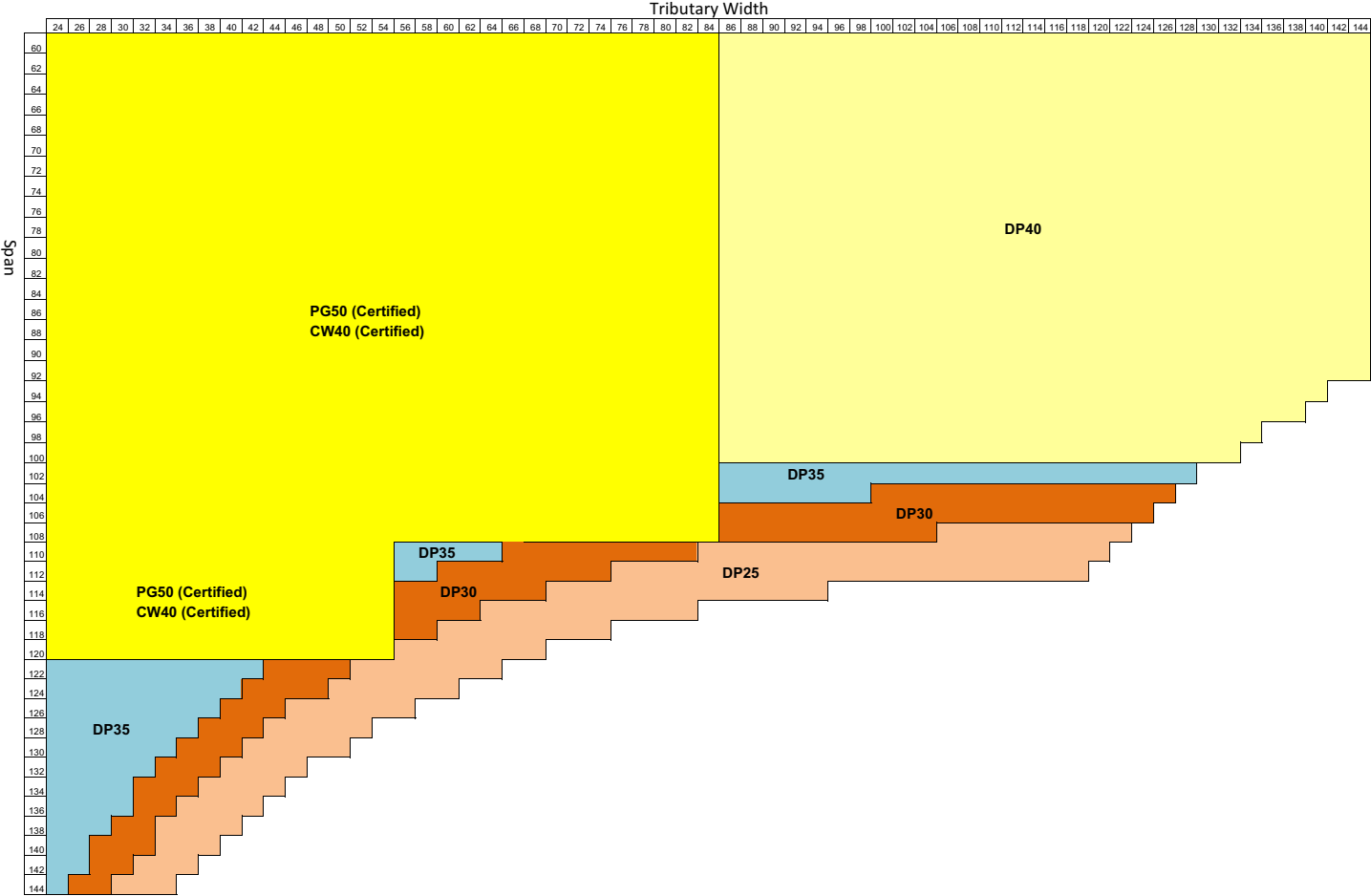
4 1/2" Stud Pocket Mull With Wood



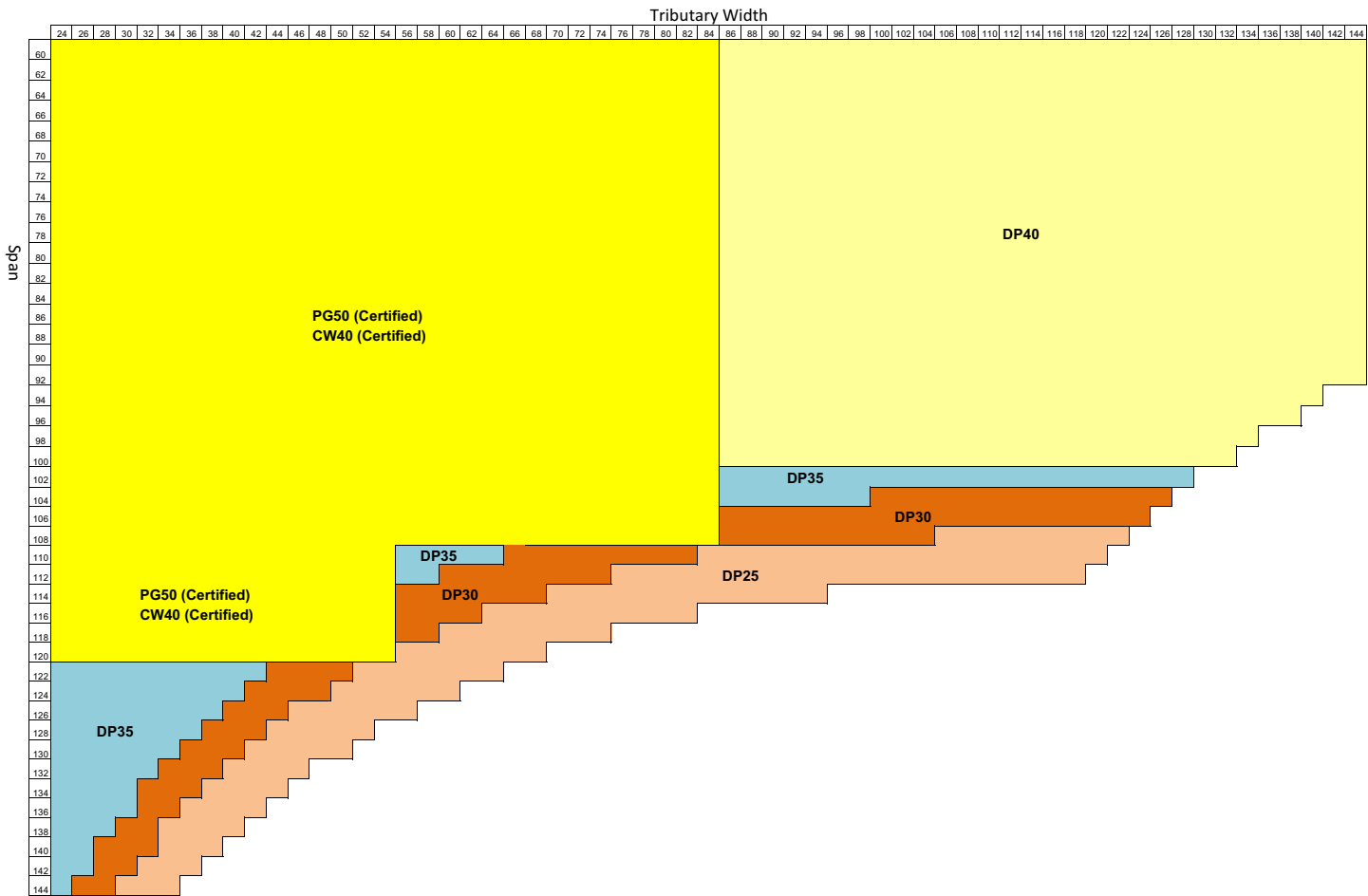
4 1/2" Stud Pocket Mull With Tube Steel

*NOTE: Mull Certification includes Direct Glaze, Casement/Awning, Inswing and Outswing door products.
Tributary spans are limited based on individual maximum unit size
Standard Aluminum Mull provided by Marvin. All other structure supplied by others.*

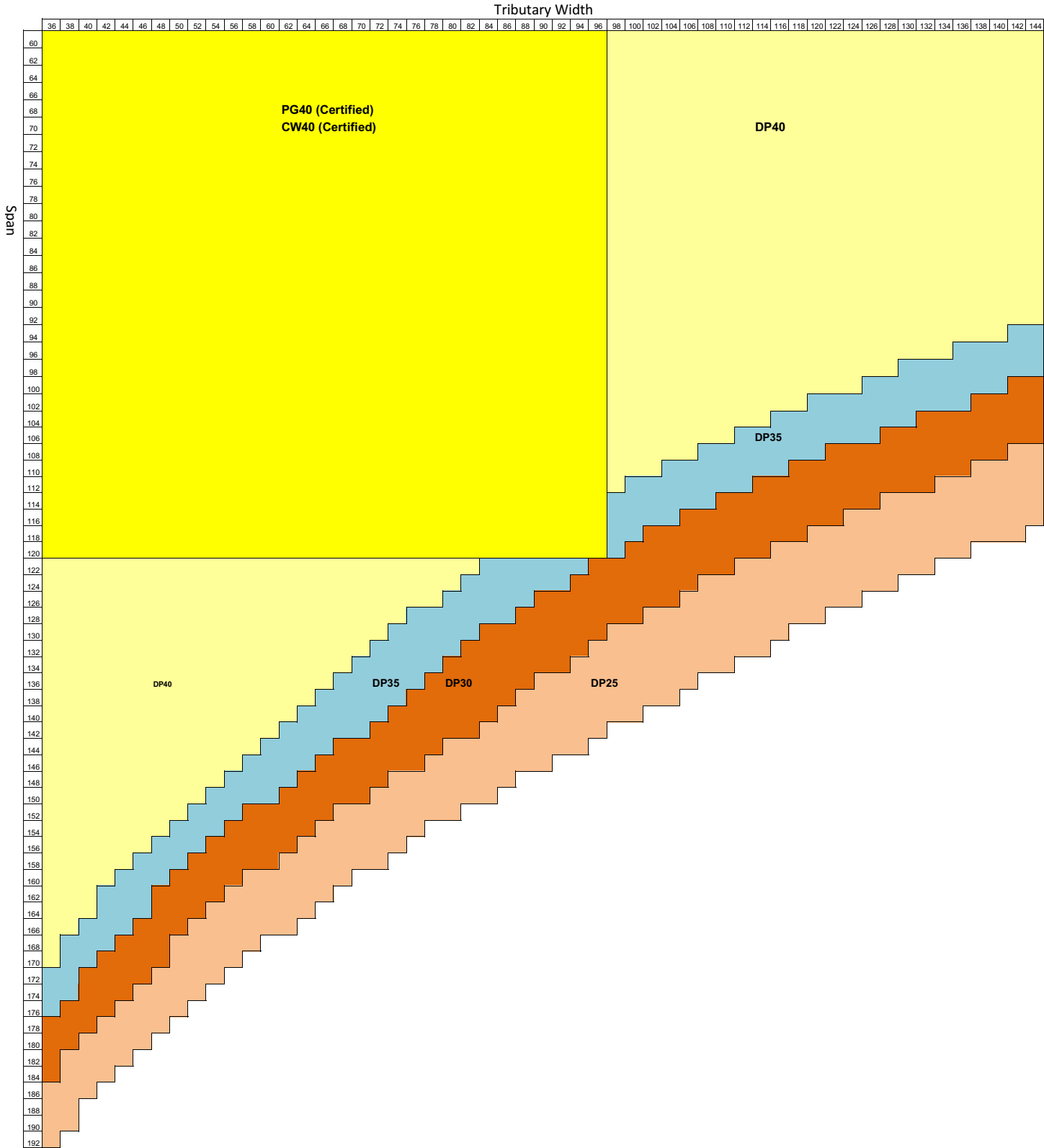
Modern Window Steel Mulling - 1/2" x 2 1/2" Flat Steel Mull (Ribbon or Stacked Assembly)



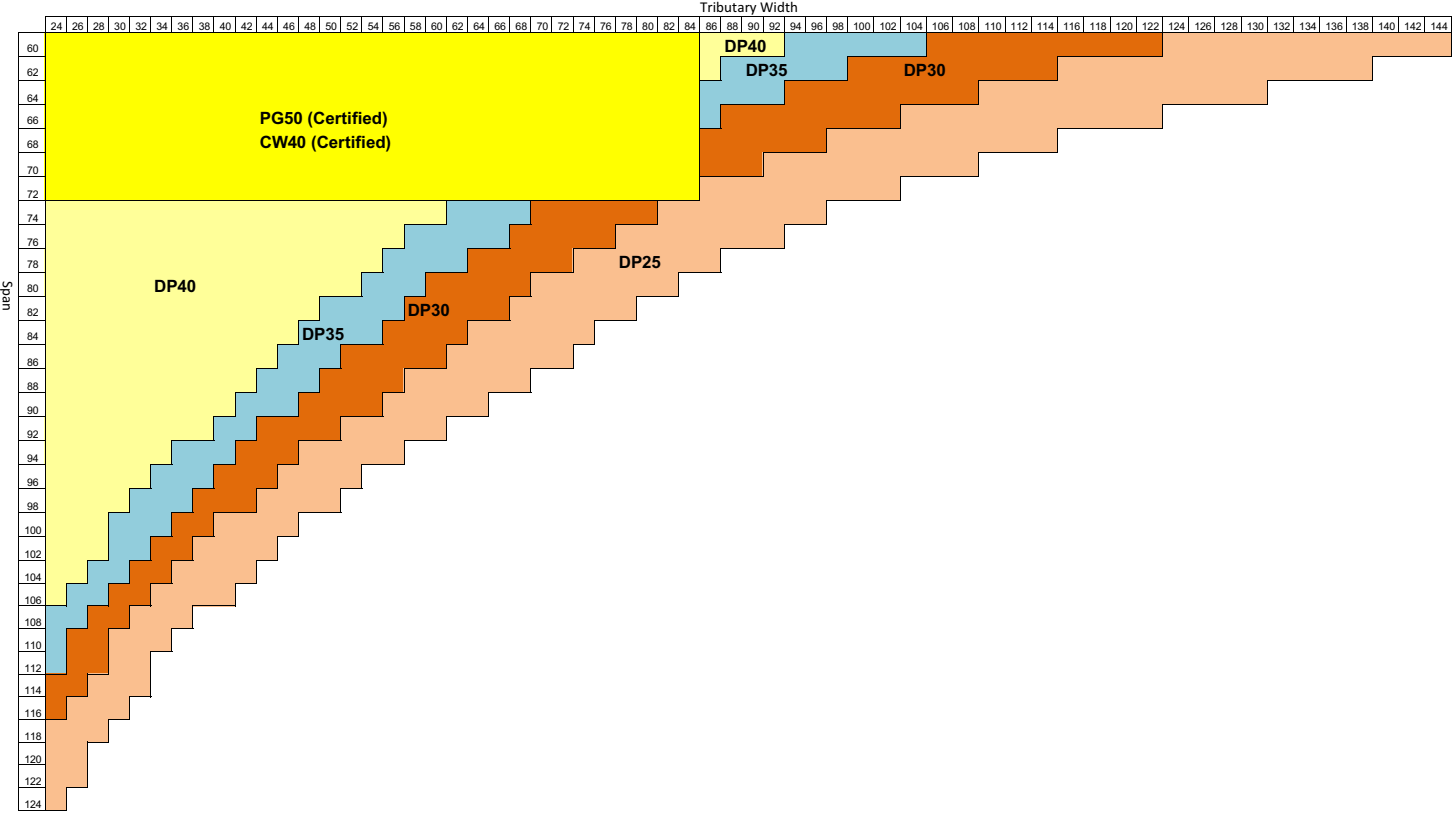
Modern Window Steel Mulling - 1/2" x 4" Flat Steel Mull (Ribbon or Stacked Assembly)



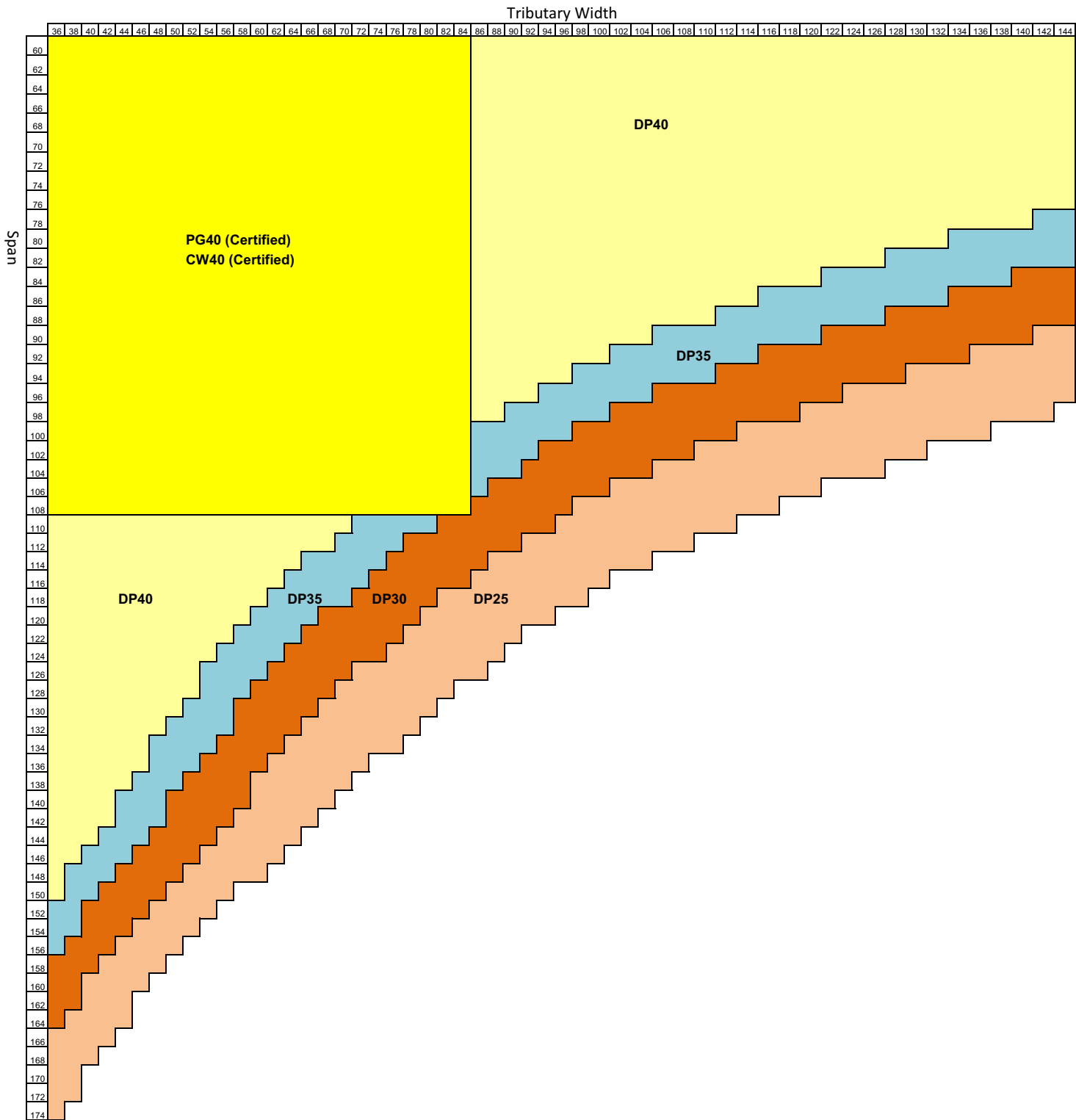
Modern Window Steel Mulling - 2" x 4" Tube Steel Mull (Ribbon or Stacked Assembly)



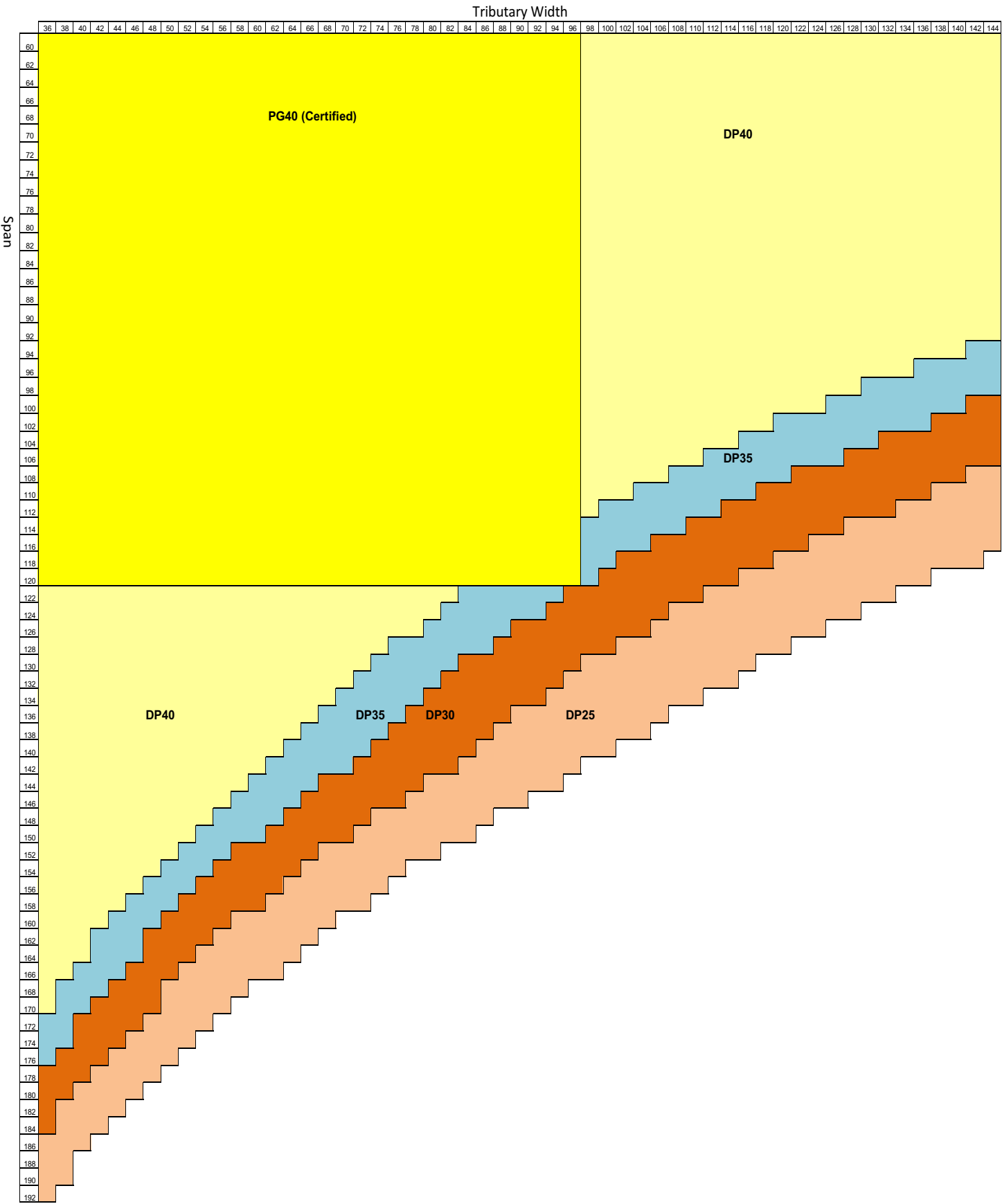
Modern Window Steel Mulling - 1/2" x 2 1/2" Flat Steel Mull (Multi-High, Multi-Wide Assembly)



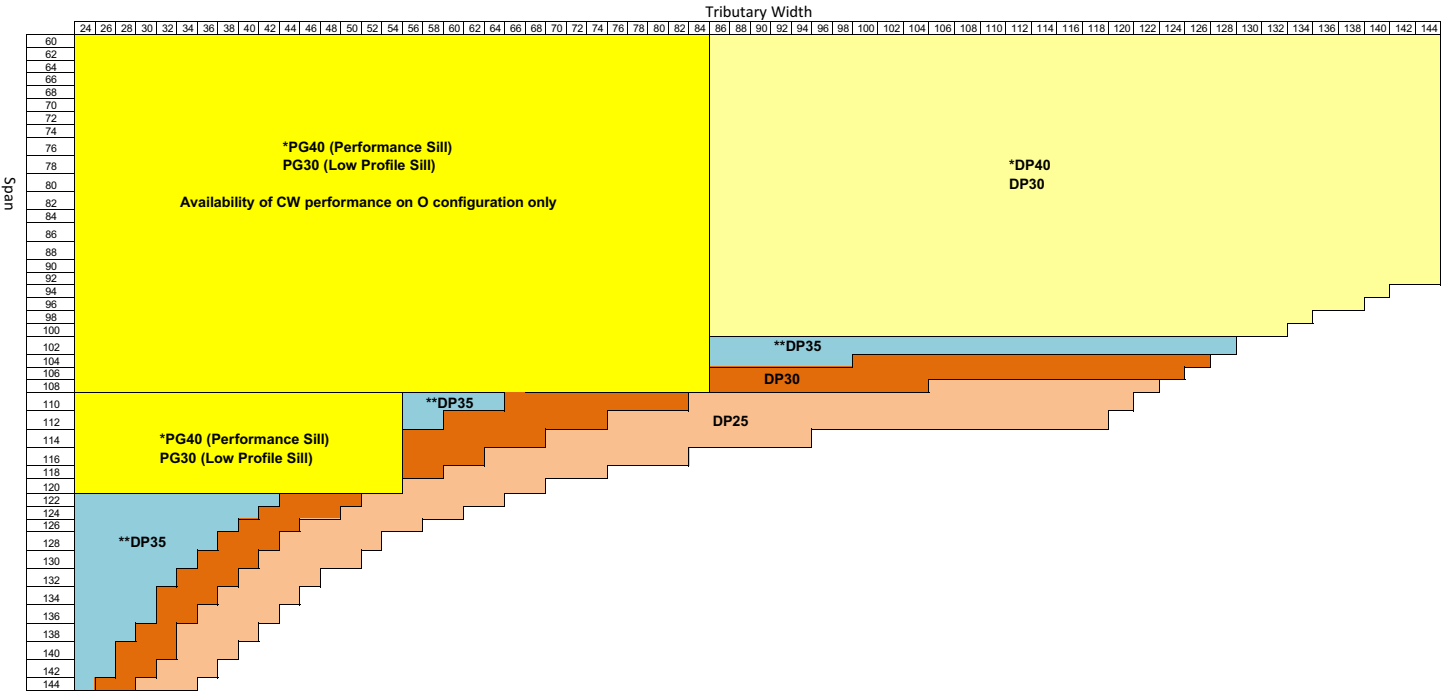
Modern Window Steel Mulling - 1/2" x 4" Flat Steel Mull (Multi-High, Multi-Wide Assembly)



Modern Window Steel Mulling - 2" x 4" Tube Steel Mull (Multi-High, Multi-Wide Assembly)



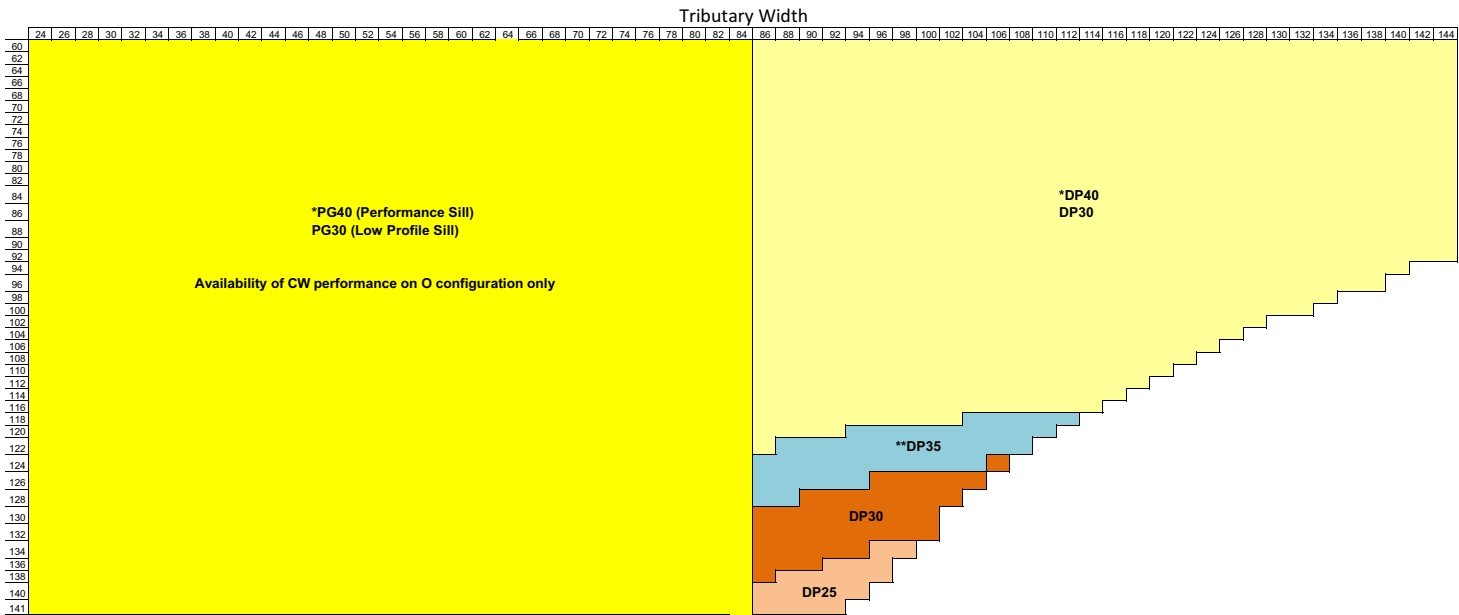
Modern Swinging Doors Mulling - 2 1/2" Steel Mull (Ribbon or Stacked Assembly)



* Inswing XX stacked mull excluded as it only meets PG30.

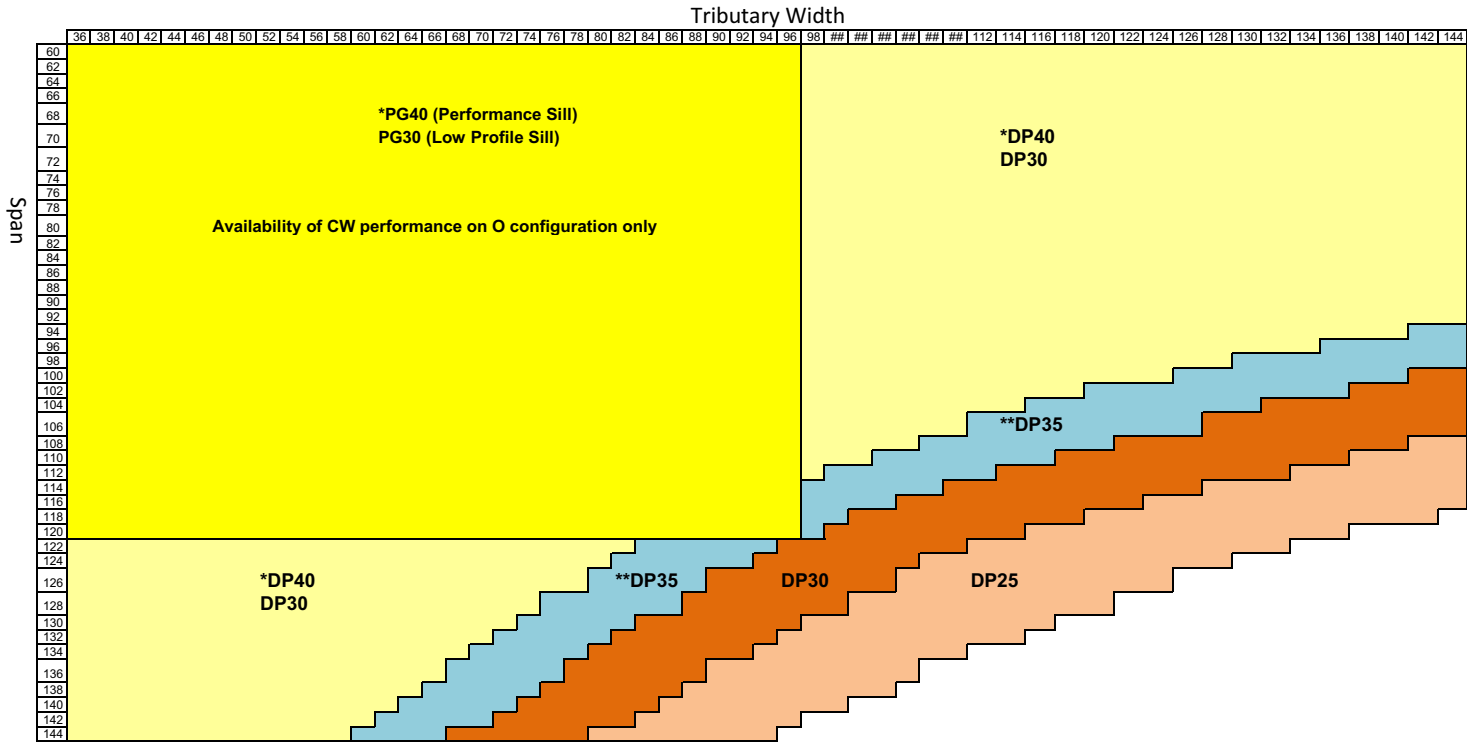
** Inswing XX stacked mull with performance sill excluded as it only meets DP30.

Modern Swinging Doors Mulling - 4" Steel Mull (Ribbon or Stacked Assembly)



* Inswing XX stacked mull excluded as it only meets PG30.
** Inswing XX stacked mull with performance sill excluded as it only meets DP30.

Modern Swinging Doors Mulling - 2" x 4" Tube Steel Mull (Ribbon or Stacked Assembly)

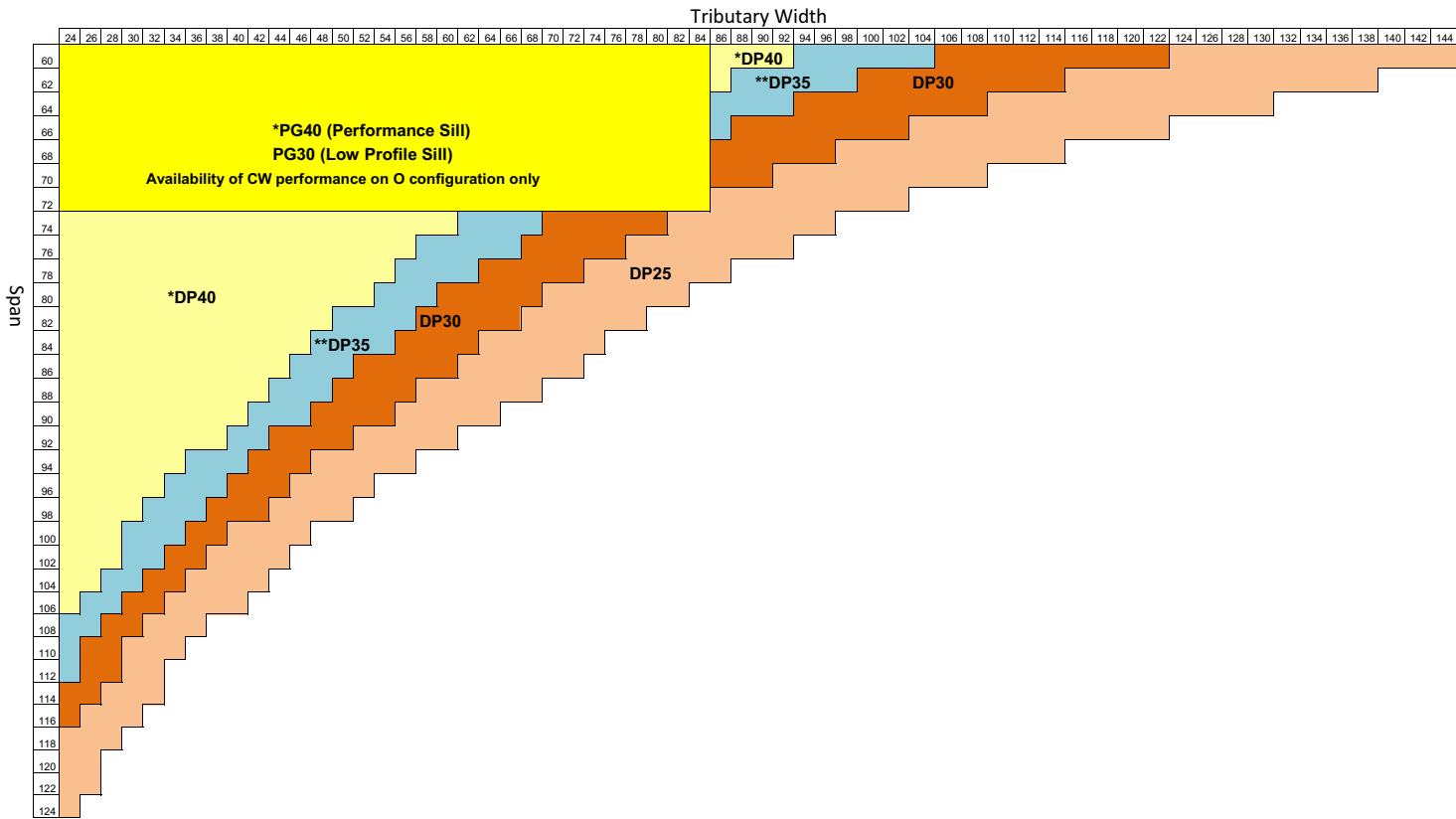


* Inswing XX stacked mull excluded as it only meets PG30.

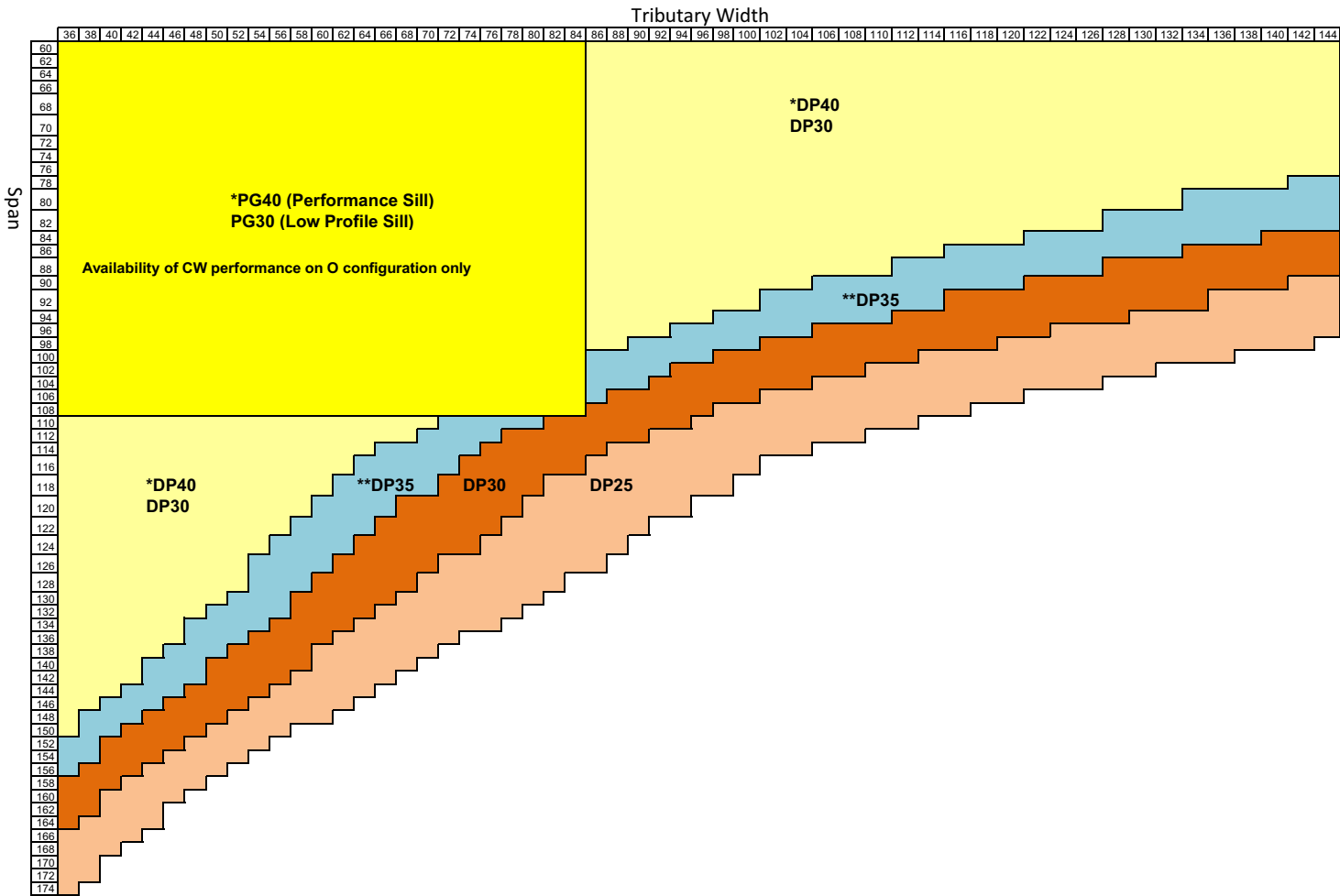
** Inswing XX stacked mull with performance sill excluded as it only meets DP30.

NOTE: Tube Steel not recommended with Operating Outswing Door mulls.

Modern Door Steel Mulling - 1/2" x 2 1/2" Flat Steel Mull (Multi-High, Multi-Wide Assembly)



Modern Door Steel Mulling - 1/2" x 4" Flat Steel Mull (Multi-High, Multi-Wide Assembly)



Modern Door Steel Mulling - 2" x 4" Tube Steel Mull (Multi-High, Multi-Wide Assembly)

