

Fire Rated Joint Assembly Verify & Comply Calculation

UL 2079 Product Cert. & Joint Deflection Design Calculation

<i>Certification Info - (UL Listing Header)</i>			<i>Project Design - Specifications</i>		
UL Listing: HW-D-0791		<i>Cert</i>	Project:		<i>Spec</i>
Nominal (Install) Joint Width Limit	<i>IGL</i>	0.75"	Deflection Spec. per E.O.R (Compress + Extension)	<i>DEF</i>	0.75"
Extension - (Multi-Story lowest %)	<i>EXT</i>	33	Install Gap Required (DEF ÷ EXT ÷ 2)	<i>IGR</i>	1.14"
Compression - (Single Story)	<i>COMP</i>	80	Architect Specified Gap	<i>ASG</i>	0.50"

Deflection = Span x 12in / Load Limit

Example: 20ft x 12in ÷ L/240 = 1.00" (one way compression)

Installed Joint (Multi-Story) = min. 1.00" & Joint Protection Required = 2.00" Overall Deflection

➤ Verify Overall Deflection with Engineer of Record: _____

Product/System – Overall <i>Certified</i> Max. DEF (Deflection)	<i>IGL</i>	<i>EXT/COMP</i>	<i>Max. DEF</i>
<i>Multi-Story Certified Limit</i> (Comp. + Ext.) = <i>IGL x EXT x 2</i>	0.75"	33%	0.50"
<i>Single-Story Certified Limit</i> (Comp. Only) = <i>IGL x COMP</i>	0.75"	80%	0.60"

Product/System – Overall <i>Design Spec.</i> Max. DEF (Deflection)	<i>ASG</i>	<i>EXT/COMP</i>	<i>Max. DEF</i>
<i>Multi-Story Authorize Limit</i> (Comp. + Ext.) = <i>ASG x EXT x 2</i>	0.50"	33%	0.165"
<i>Single-Story Limit</i> (Comp. Only) = <i>AIG x COMP</i>	0.50"	80%	0.40"

➤ ***Max DEF < DEF – Non-Compliant*** (Verify Spec. & Plan Set Details)

<i>Movement Capability – Zone Rating Definitions</i>		
Class I	Thermal	500 cycles – 1 cycle/min
Class II	Wind Sway	500 cycles – 10 cycle/min
Class III	Seismic	500 cycles – 30 cycle/min

Conversion Chart	
1/4"	.250
3/8"	.375
1/2"	.500
5/8"	.625
3/4"	.750

Submitted By: _____ (Print) _____ Date: ___/___/___

Company: _____