

# Technical Bulletin

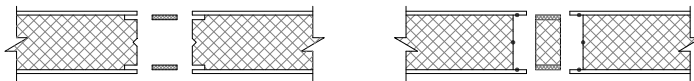
## Roof and Floor Transverse Load Design Charts - US Model Codes

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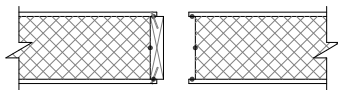
This bulletin provides transverse design loads for the Insulspan® Structural Insulating Panel (SIP) System when used as a component in roof or floor systems designed in accordance with the **2006 International Building Code®** and **2006 International Residential Code®**. Insulspan has completed structural testing of the Insulspan SIP System for this application using a third party testing laboratory following the requirements of ASTM E72, **Standard Test Methods of Conducting Strength Tests of Panels for Building Construction**.

The attached **Transverse Design Load** charts dated September 10, 2009 summarize total design loads with the following vertical joint configurations:

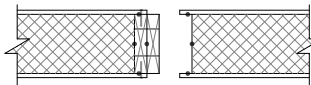
- Table R-1-S – OSB Surface Spline or Insulspline



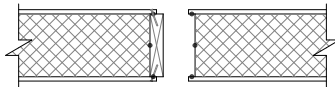
- Table R-2-L – Single 2x Lumber



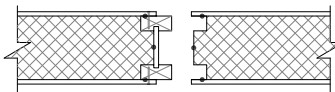
- Table R-3-DL – Double 2x Lumber



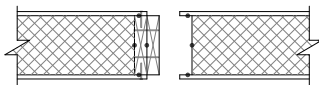
- Table R-4-LVL – Single 1.8E LVL



- Table R-5-I – Wood I-Joist



- Table R-6-DLVL – Double 1.8E LVL



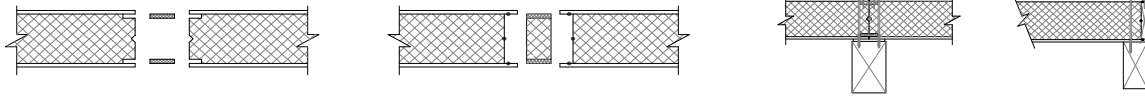
**Contact:**

East: 1-800-726-3510

West: 1-866-848-8855

www.insulspan.com

**Table R-1-S ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



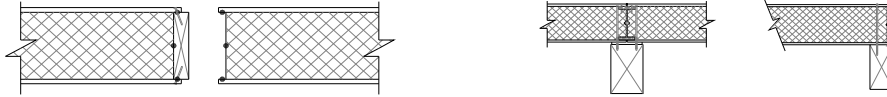
Thickness		Allowable Deflection	OSB SURFACE SPLINES OR INSULSPLINES															
SIP	EPS		PANEL SPAN (feet)															
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
4 1/2"	3 5/8"	L/360	94	73	55	42	33	26	21	17	14	-	-	-	-	-	-	
		L/240	<b>121</b>	<b>97</b>	<b>81</b>	64	50	39	32	26	21	-	-	-	-	-	-	-
		L/180	<b>121</b>	<b>97</b>	<b>81</b>	<b>68</b>	<b>56</b>	<b>47</b>	<b>39</b>	<b>32</b>	<b>27</b>	-	-	-	-	-	-	-
6 1/2"	5 5/8"	L/360	<b>136</b>	<b>109</b>	84	66	53	43	35	29	24	-	-	-	-	-	-	
		L/240	<b>136</b>	<b>109</b>	<b>91</b>	<b>78</b>	<b>68</b>	<b>60</b>	52	43	36	-	-	-	-	-	-	-
		L/180	<b>136</b>	<b>109</b>	<b>91</b>	<b>78</b>	<b>68</b>	<b>60</b>	<b>54</b>	<b>46</b>	<b>39</b>	-	-	-	-	-	-	-
8 1/4"	7 3/8"	L/360	<b>151</b>	<b>120</b>	<b>100</b>	<b>86</b>	73	60	50	42	36	30	26	22	19	17	15	
		L/240	<b>151</b>	<b>120</b>	<b>100</b>	<b>86</b>	<b>75</b>	<b>67</b>	<b>60</b>	<b>55</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>33</b>	<b>29</b>	<b>25</b>	<b>22</b>	
		L/180	<b>151</b>	<b>120</b>	<b>100</b>	<b>86</b>	<b>75</b>	<b>67</b>	<b>60</b>	<b>55</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>33</b>	<b>29</b>	<b>26</b>	<b>23</b>	
10 1/4"	9 3/8"	L/360	<b>159</b>	<b>127</b>	<b>106</b>	<b>91</b>	<b>79</b>	<b>71</b>	<b>63</b>	<b>58</b>	51	44	38	33	29	26	23	
		L/240	<b>159</b>	<b>127</b>	<b>106</b>	<b>91</b>	<b>79</b>	<b>71</b>	<b>63</b>	<b>58</b>	<b>53</b>	<b>49</b>	<b>43</b>	<b>37</b>	<b>33</b>	<b>29</b>	<b>26</b>	
		L/180	<b>159</b>	<b>127</b>	<b>106</b>	<b>91</b>	<b>79</b>	<b>71</b>	<b>63</b>	<b>58</b>	<b>53</b>	<b>49</b>	<b>43</b>	<b>37</b>	<b>33</b>	<b>29</b>	<b>26</b>	
12 1/4"	11 3/8"	L/360	<b>167</b>	<b>134</b>	<b>111</b>	<b>95</b>	<b>83</b>	<b>74</b>	<b>67</b>	<b>61</b>	<b>56</b>	<b>51</b>	<b>48</b>	<b>43</b>	<b>37</b>	<b>33</b>	<b>30</b>	
		L/240	<b>167</b>	<b>134</b>	<b>111</b>	<b>95</b>	<b>83</b>	<b>74</b>	<b>67</b>	<b>61</b>	<b>56</b>	<b>51</b>	<b>48</b>	<b>43</b>	<b>37</b>	<b>33</b>	<b>30</b>	
		L/180	<b>167</b>	<b>134</b>	<b>111</b>	<b>95</b>	<b>83</b>	<b>74</b>	<b>67</b>	<b>61</b>	<b>56</b>	<b>51</b>	<b>48</b>	<b>43</b>	<b>37</b>	<b>33</b>	<b>30</b>	

Revision : September 10, 2009

**Notes:**

1. The tabulated values are total design loads for panels with nominal 2" wide bearing at supports based upon design requirements of 2006 International Building Code® and International Residential Code®. Values printed in bold type are based on panel strength rather than stiffness.
2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Insulspan SIP skins are nailed to the vertical OSB splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
5. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
6. Insulspan SIP System exterior skins are minimum 7/16-inch thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
7. Roof panels subject to concentrated roof maintenance live loads must be limited to maximum span of 8 feet for 4 1/2" roof panels and 16 feet for 8 1/4" or 10 1/4" roof panels.
8. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.

**Table R-2-L ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



Thickness		Allowable Deflection	PANEL SPAN (feet)																
SIP	EPS		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4 1/2"	3 5/8"	L/360	94	71	55	43	35	28	23	19	16	14	12	-	-	-	-	-	-
		L/240	142	106	82	65	52	42	35	29	24	20	17	-	-	-	-	-	-
		L/180	<b>189</b>	<b>142</b>	<b>110</b>	87	70	57	47	39	32	27	23	-	-	-	-	-	-
6 1/2"	5 5/8"	L/360	246	181	138	107	84	67	54	45	37	31	26	22	19	16	14	12	11
		L/240	<b>248</b>	<b>199</b>	<b>165</b>	<b>142</b>	<b>124</b>	101	82	67	55	46	39	33	28	24	21	18	16
		L/180	<b>248</b>	<b>199</b>	<b>165</b>	<b>142</b>	<b>124</b>	<b>110</b>	<b>99</b>	<b>87</b>	<b>74</b>	<b>62</b>	<b>52</b>	44	37	32	28	24	21
8 1/4"	7 3/8"	L/360	<b>267</b>	<b>214</b>	<b>178</b>	<b>153</b>	130	104	84	69	57	48	40	34	29	25	21	19	16
		L/240	<b>267</b>	<b>214</b>	<b>178</b>	<b>153</b>	<b>134</b>	<b>119</b>	<b>107</b>	<b>97</b>	86	71	60	51	43	37	32	28	25
		L/180	<b>267</b>	<b>214</b>	<b>178</b>	<b>153</b>	<b>134</b>	<b>119</b>	<b>107</b>	<b>97</b>	<b>89</b>	<b>78</b>	<b>67</b>	<b>58</b>	<b>51</b>	<b>45</b>	<b>41</b>	<b>36</b>	33
10 1/4"	9 3/8"	L/360	<b>295</b>	<b>236</b>	<b>196</b>	<b>168</b>	<b>147</b>	<b>131</b>	<b>118</b>	100	85	72	61	53	45	39	34	30	27
		L/240	<b>295</b>	<b>236</b>	<b>196</b>	<b>168</b>	<b>147</b>	<b>131</b>	<b>118</b>	<b>107</b>	<b>98</b>	<b>90</b>	<b>78</b>	<b>68</b>	<b>59</b>	<b>53</b>	<b>47</b>	<b>42</b>	<b>38</b>
		L/180	<b>295</b>	<b>236</b>	<b>196</b>	<b>168</b>	<b>147</b>	<b>131</b>	<b>118</b>	<b>107</b>	<b>98</b>	<b>90</b>	<b>78</b>	<b>68</b>	<b>59</b>	<b>53</b>	<b>47</b>	<b>42</b>	<b>38</b>
12 1/4"	11 3/8"	L/360	<b>322</b>	<b>258</b>	<b>215</b>	<b>184</b>	<b>161</b>	<b>143</b>	<b>129</b>	<b>117</b>	<b>107</b>	98	85	74	64	56	50	44	39
		L/240	<b>322</b>	<b>258</b>	<b>215</b>	<b>184</b>	<b>161</b>	<b>143</b>	<b>129</b>	<b>117</b>	<b>107</b>	<b>99</b>	<b>91</b>	<b>79</b>	<b>69</b>	<b>61</b>	<b>55</b>	<b>49</b>	<b>44</b>
		L/180	<b>322</b>	<b>258</b>	<b>215</b>	<b>184</b>	<b>161</b>	<b>143</b>	<b>129</b>	<b>117</b>	<b>107</b>	<b>99</b>	<b>91</b>	<b>79</b>	<b>69</b>	<b>61</b>	<b>55</b>	<b>49</b>	<b>44</b>

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2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Acceptable 2x4 or 2x6 lumber for assembly of the Insulspan SIP System is SPF #2 & better; acceptable 2x8, 2x10 or 2x12 lumber is Hem Fir #2 & better.
5. Insulspan SIP skins are nailed to the vertical lumber splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
6. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
7. Insulspan SIP System exterior skins are minimum 7/16" thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
8. Roof panels subject to concentrated roof maintenance live loads must be limited to maximum span of 8 feet for 4 1/2" roof panels, 14 feet for 6 1/2" roof panels and 18 feet for 8 1/4" roof panels
9. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.

**Table R-3-DL ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



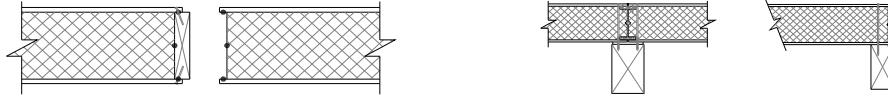
Thickness		Allowable Deflection	DOUBLE 2 x LUMBER SPLINES @ 4'-0" On Center																
SIP	EPS		PANEL SPAN (feet)																
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4 1/2"	3 5/8"	L/360	162	115	68	54	40	33	26	22	18	15	13	-	-	-	-	-	-
		L/240	<b>195</b>	147	100	79	59	49	39	33	27	23	20	-	-	-	-	-	-
		L/180	<b>195</b>	<b>162</b>	<b>129</b>	103	78	65	52	44	36	31	26	-	-	-	-	-	-
6 1/2"	5 5/8"	L/360	246	200	155	119	84	69	55	46	38	32	27	24	21	18	16	14	13
		L/240	<b>248</b>	<b>210</b>	<b>173</b>	<b>148</b>	<b>124</b>	103	82	69	57	49	41	36	31	27	24	21	19
		L/180	<b>248</b>	<b>210</b>	<b>173</b>	<b>148</b>	<b>124</b>	<b>111</b>	<b>99</b>	<b>87</b>	<b>74</b>	63	52	47	41	36	32	29	26
8 1/4"	7 3/8"	L/360	<b>267</b>	<b>228</b>	<b>190</b>	166	142	115	89	75	62	53	45	39	34	30	26	23	21
		L/240	<b>267</b>	<b>228</b>	<b>190</b>	<b>169</b>	<b>148</b>	<b>129</b>	<b>111</b>	<b>100</b>	<b>90</b>	78	66	57	49	44	39	35	31
		L/180	<b>267</b>	<b>228</b>	<b>190</b>	<b>169</b>	<b>148</b>	<b>129</b>	<b>111</b>	<b>100</b>	<b>90</b>	<b>82</b>	<b>75</b>	<b>69</b>	<b>63</b>	57	51	46	41
10 1/4"	9 3/8"	L/360	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>160</b>	<b>136</b>	116	97	83	70	61	53	47	41	37	33
		L/240	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>160</b>	<b>136</b>	<b>120</b>	<b>105</b>	<b>96</b>	<b>88</b>	<b>81</b>	<b>75</b>	<b>69</b>	<b>64</b>	56	48
		L/180	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>160</b>	<b>136</b>	<b>120</b>	<b>105</b>	<b>96</b>	<b>88</b>	<b>81</b>	<b>75</b>	<b>69</b>	<b>64</b>	<b>59</b>	<b>55</b>
12 1/4"	11 3/8"	L/360	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>175</b>	<b>161</b>	<b>142</b>	<b>123</b>	<b>111</b>	<b>99</b>	88	78	69	61	54	48
		L/240	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>175</b>	<b>161</b>	<b>142</b>	<b>123</b>	<b>111</b>	<b>99</b>	<b>91</b>	<b>84</b>	<b>78</b>	<b>72</b>	<b>67</b>	<b>63</b>
		L/180	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>175</b>	<b>161</b>	<b>142</b>	<b>123</b>	<b>111</b>	<b>99</b>	<b>91</b>	<b>84</b>	<b>78</b>	<b>72</b>	<b>67</b>	<b>63</b>

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**Notes:**

1. The tabulated values are total design loads for panels with nominal 2" wide bearing at supports based upon design requirements of 2006 International Building Code<sup>®</sup> and International Residential Code<sup>®</sup>. Values printed in bold type are based on panel strength rather than stiffness.
2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Acceptable 2x4 or 2x6 lumber for assembly of the Insulspan SIP System is SPF #2 & better; acceptable 2x8, 2x10 or 2x12 lumber is Hem Fir #2 & better.
5. Insulspan SIP skins are nailed to the vertical lumber splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
6. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
7. Insulspan SIP System exterior skins are minimum 7/16" thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
8. Roof panels subject to concentrated roof maintenance live loads must be limited to maximum span of 10 feet for 4 1/2" roof panels and 16 feet for 6 1/2" roof panels
9. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.

**Table R-4-LVL ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



Thickness		Allowable Deflection	SINGLE LVL SPLINES @ 4'-0" On Center																
SIP	EPS		PANEL SPAN (feet)																
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4 1/2"	3 5/8"	L/360	142	102	63	49	36	30	24	20	17	14	12	-	-	-	-	-	-
		L/240	<b>189</b>	140	92	72	53	44	35	30	25	21	18	-	-	-	-	-	-
		L/180	<b>189</b>	154	120	95	70	58	47	40	33	28	24	-	-	-	-	-	-
6 1/2"	5 5/8"	L/360	246	192	138	111	84	69	54	45	37	31	26	22	19	17	15	13	12
		L/240	<b>248</b>	<b>215</b>	<b>183</b>	153	124	103	82	68	55	47	39	33	28	24	21	19	17
		L/180	<b>248</b>	<b>215</b>	<b>183</b>	162	142	120	99	87	74	63	52	44	37	32	28	25	23
8 1/4"	7 3/8"	L/360	<b>267</b>	<b>228</b>	<b>190</b>	160	130	107	84	70	57	48	40	34	29	26	23	20	18
		L/240	<b>267</b>	<b>228</b>	<b>190</b>	<b>182</b>	<b>174</b>	143	113	99	86	73	60	51	43	38	33	30	27
		L/180	<b>267</b>	<b>228</b>	<b>190</b>	<b>182</b>	<b>174</b>	<b>157</b>	<b>140</b>	119	98	84	71	62	54	48	43	38	34
10 1/4"	9 3/8"	L/360	<b>295</b>	<b>245</b>	<b>196</b>	<b>189</b>	<b>183</b>	153	123	104	85	73	62	54	46	41	36	32	28
		L/240	<b>295</b>	<b>245</b>	<b>196</b>	<b>189</b>	<b>183</b>	<b>175</b>	<b>167</b>	144	122	105	89	77	66	58	51	46	41
		L/180	<b>295</b>	<b>245</b>	<b>196</b>	<b>189</b>	<b>183</b>	<b>175</b>	<b>167</b>	<b>156</b>	<b>145</b>	129	114	99	84	74	65	58	52
12 1/4"	11 3/8"	L/360	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>184</b>	<b>178</b>	150	123	106	90	78	67	59	52	46	41
		L/240	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>184</b>	<b>178</b>	<b>172</b>	<b>167</b>	148	129	113	97	86	75	67	59
		L/180	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>184</b>	<b>178</b>	<b>172</b>	<b>167</b>	<b>157</b>	<b>148</b>	136	124	109	95	85	76

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**Notes:**

1. The tabulated values are total design loads for panels with nominal 2" wide bearing at supports based upon design requirements of 2006 International Building Code<sup>®</sup> and International Residential Code<sup>®</sup>. Values printed in bold type are based on panel strength rather than stiffness.
2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Acceptable LVL for assembly of the Insulspan SIP System is 1.8E LVL or better.
5. Insulspan SIP skins are nailed to the vertical LVL splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
6. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
7. Insulspan SIP System exterior skins are minimum 7/16" thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
8. Roof panels subject to concentrated roof maintenance live loads must be limited to maximum span of 8 feet for 4 1/2" roof panels and 14 feet for 6 1/2" roof panels.
9. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.

**Table R-5-I ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



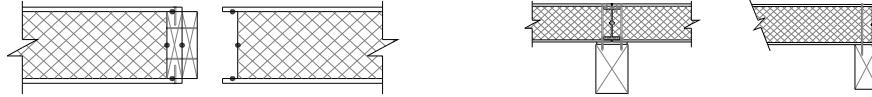
Thickness		Allowable Deflection	WOOD I-JOIST SPLINES @ 4'-0" On Center																
SIP	EPS		PANEL SPAN (feet)																
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
8 1/4"	7 3/8"	L/360	<b>215</b>	<b>195</b>	<b>175</b>	<b>152</b>	<b>130</b>	107	84	70	57	48	40	34	29	25	22	20	18
		L/240	<b>215</b>	<b>195</b>	<b>175</b>	<b>152</b>	<b>130</b>	<b>117</b>	<b>105</b>	95	86	73	60	51	43	38	33	30	27
		L/180	<b>215</b>	<b>195</b>	<b>175</b>	<b>152</b>	<b>130</b>	<b>117</b>	<b>105</b>	<b>97</b>	<b>90</b>	80	71	62	54	48	43	39	35
10 1/4"	9 3/8"	L/360	<b>290</b>	<b>240</b>	<b>190</b>	<b>167</b>	<b>145</b>	<b>132</b>	<b>120</b>	102	85	73	61	53	45	39	34	30	27
		L/240	<b>290</b>	<b>240</b>	<b>190</b>	<b>167</b>	<b>145</b>	<b>132</b>	<b>120</b>	<b>110</b>	<b>100</b>	<b>90</b>	<b>80</b>	70	60	54	48	43	38
		L/180	<b>290</b>	<b>240</b>	<b>190</b>	<b>167</b>	<b>145</b>	<b>132</b>	<b>120</b>	<b>110</b>	<b>100</b>	<b>90</b>	<b>80</b>	79	78	70	62	56	50
12 1/4"	11 3/8"	L/360	<b>315</b>	<b>257</b>	<b>200</b>	<b>180</b>	<b>160</b>	<b>145</b>	<b>130</b>	<b>120</b>	<b>110</b>	97	85	74	64	57	50	44	39
		L/240	<b>315</b>	<b>257</b>	<b>200</b>	<b>180</b>	<b>160</b>	<b>145</b>	<b>130</b>	<b>120</b>	<b>110</b>	<b>102</b>	<b>95</b>	<b>87</b>	<b>80</b>	72	64	58	52
		L/180	<b>315</b>	<b>257</b>	<b>200</b>	<b>180</b>	<b>160</b>	<b>145</b>	<b>130</b>	<b>120</b>	<b>110</b>	<b>102</b>	<b>95</b>	<b>87</b>	<b>80</b>	<b>75</b>	<b>70</b>	67	65

Revision : September 10, 2009

**Notes:**

1. The tabulated values are total design loads for panels with nominal 2" wide bearing at supports based upon design requirements of 2006 International Building Code® and International Residential Code®. Values printed in bold type are based on panel strength rather than stiffness.
2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Acceptable wood I-joists for assembly of the Insulspan SIP System are Nascor NJH, Jager JSI2000 and Trus Joist TJI 100C or better.
5. Insulspan SIP skins are nailed to the vertical wood I-joist splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
6. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
7. Insulspan SIP System exterior skins are minimum 7/16" thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
8. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.

**Table R-6-DLVL ROOF AND FLOOR TRANSVERSE DESIGN LOAD (psf)**



Thickness		Allowable Deflection	DOUBLE LVL SPLINES @ 4'-0" On Center																
SIP	EPS		PANEL SPAN (feet)																
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4 1/2"	3 5/8"	L/360	<b>200</b>	141	82	63	45	36	28	23	19	16	14	12	10	-	-	-	-
		L/240	<b>200</b>	160	121	94	67	54	42	35	29	25	21	18	16	-	-	-	-
		L/180	<b>200</b>	179	158	123	88	72	56	47	39	33	28	24	21	-	-	-	-
6 1/2"	5 5/8"	L/360	<b>248</b>	<b>215</b>	<b>183</b>	143	104	84	65	54	43	37	31	27	23	20	18	16	14
		L/240	<b>248</b>	<b>215</b>	<b>183</b>	166	150	122	95	79	63	54	45	39	33	29	26	23	21
		L/180	<b>248</b>	<b>215</b>	<b>183</b>	<b>169</b>	<b>156</b>	140	124	103	82	70	58	51	44	39	34	30	27
8 1/4"	7 3/8"	L/360	<b>267</b>	<b>228</b>	<b>190</b>	<b>184</b>	<b>179</b>	144	110	92	75	64	53	46	39	34	30	26	23
		L/240	<b>267</b>	<b>228</b>	<b>190</b>	<b>184</b>	<b>179</b>	<b>165</b>	<b>152</b>	130	109	93	77	66	56	49	43	38	34
		L/180	<b>267</b>	<b>228</b>	<b>190</b>	<b>184</b>	<b>179</b>	<b>165</b>	<b>152</b>	<b>143</b>	<b>135</b>	117	100	86	73	64	56	50	44
10 1/4"	9 3/8"	L/360	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>179</b>	<b>174</b>	148	122	104	87	75	64	56	49	43	38
		L/240	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>179</b>	<b>174</b>	<b>164</b>	<b>154</b>	140	126	110	94	82	71	63	55
		L/180	<b>295</b>	<b>245</b>	<b>196</b>	<b>190</b>	<b>185</b>	<b>179</b>	<b>174</b>	<b>164</b>	<b>154</b>	<b>147</b>	<b>140</b>	131	122	107	92	82	72
12 1/4"	11 3/8"	L/360	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>186</b>	<b>182</b>	<b>177</b>	<b>172</b>	151	130	113	97	85	73	65	57
		L/240	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>186</b>	<b>182</b>	<b>177</b>	<b>172</b>	<b>164</b>	<b>156</b>	148	141	125	109	97	85
		L/180	<b>322</b>	<b>268</b>	<b>215</b>	<b>202</b>	<b>190</b>	<b>186</b>	<b>182</b>	<b>177</b>	<b>172</b>	<b>164</b>	<b>156</b>	<b>150</b>	<b>145</b>	<b>141</b>	<b>137</b>	123	110

Revision : September 10, 2009

**Notes:**

1. The tabulated values are total design loads for panels with nominal 2" wide bearing at supports based upon design requirements of 2006 International Building Code<sup>®</sup> and International Residential Code<sup>®</sup>. Values printed in bold type are based on panel strength rather than stiffness.
2. The span of a sloped roof panel must be measured along the slope. Design loads are to be calculated as normal loads acting perpendicular to the face of the panel.
3. Insulspan SIP System must be assembled as per Insulspan Installation Guide and recommended assembly details.
4. Acceptable LVL lumber for use with the Insulspan SIP System is 1.8E LVL or better.
5. Insulspan SIP skins are nailed to the vertical double LVL splines at panel joints using minimum 8d box nails @ 6" on center or equivalent.
6. Insulspan SIP System core material is molded expanded polystyrene (EPS) insulation complying with the requirements of ASTM C 578, type I.
7. Insulspan SIP System exterior skins are minimum 7/16" thick structural grade oriented strand board (OSB) conforming to DOC PS2, exposure 1.
8. Roof panels subject to concentrated roof maintenance live loads must be limited to maximum span of 10 feet for 4 1/2" roof panels and 18 feet for 6 1/2" roof panels.
9. An approved thermal barrier, such as 7/16-inch thick wood-based structural-use sheathing, must be installed over the top surface of floor panels.