

LSL10 Rafters and Purlins



Date: 23rd February 2017

Loading Conditions

10 degrees rafter pitch

0.9KPa Ground Snow

Very High Wind Zone (3604) - 50m/s

Light Sheet Roofing 10kg/m2 only

Wind pressure coefficients = Cpe 0.7, Cpi -0.3

Roof height limited to 10m

Double members blocked at every second purlin for lateral stability

Members to be used in an enclosed or sheltered environment not in contact with the ground.

Mid Span Rafters

Note: purlin spacing needs to be closer at end of roof to support iron

Rafter Single Clear Span (mm)

Bay Spacing (mm)	Purlins @ 900mm c/c	Purlins @ 1200mm c/c	5400	6000	7200	9600	12000
3600	140x45 LVL8	140x45 LVL8	360x45 LSL10 / 300x63 LSL10	360x45 LSL10 / 300x63 LSL10	400x63 LSL10	600x63 LSL10	2/600x63 LSL10
4200	200x45 LSL10	200x45 LSL10	360x45 LSL10 / 300x63 LSL10	400x63 LSL10	400x63 LSL10	600x63 LSL10	2/600x63 LSL10
4800	200x45 LSL10	200x45 LSL10	400x63 LSL10	400x63 LSL10	600x63 LSL10	2/600x63 LSL10	2/600x63 LSL10
5400	240x45 LSL10	240x45 LSL10	400x63 LSL10	400x63 LSL10	600x63 LSL10	2/600x63 LSL10	2/600x63 LSL10
6000	240x45 LSL10	240x45 LSL10	400x63 LSL10	400x63 LSL10	600x63 LSL10	2/600x63 LSL10	2/600x63 LSL10
7200	300x45 LSL10	300x45 LSL10	400x63 LSL10	600x63 LSL10	600x63 LSL10	2/600x63 LSL10	-

Blocking recommended at mid span

Requires fly brace @ the middle four purlins

End Wall Rafters

Note: purlin spacing needs to be closer at end of roof to support iron

End Wall Rafter Single Clear Span (mm)

End Wall Rafter Continuous Equal Span or Long span in a 60:40 ratio (mm)

Bay Spacing (mm)	Purlins @ 900mm c/c	Purlins @ 1200mm c/c	3000	3600	5400	6000	7200	2700	3000	3600	4800	6000
3600	140x45 LVL8	140x45 LVL8	200x45 LSL10	200x45 LSL10	240x45 LSL10	300x45 LSL10	300x45 LSL10	140x45 LVL8	140x45 LVL8	200x45 LSL10	200x45 LSL10	240x45 LSL10
4200	200x45 LSL10	200x45 LSL10	200x45 LSL10	200x45 LSL10	300x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10	140x45 LVL8	140x45 LVL8	200x45 LSL10	200x45 LSL10	240x45 LSL10
4800	200x45 LSL10	200x45 LSL10	200x45 LSL10	200x45 LSL10	300x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10	140x45 LVL8	200x45 LSL10	200x45 LSL10	200x45 LSL10	300x45 LSL10
5400	240x45 LSL10	240x45 LSL10	240x45 LSL10	200x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10	400x63 LSL10	200x45 LSL10	200x45 LSL10	200x45 LSL10	240x45 LSL10	300x45 LSL10
6000	240x45 LSL10	240x45 LSL10	240x45 LSL10	240x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10	400x63 LSL10	200x45 LSL10	200x45 LSL10	200x45 LSL10	240x45 LSL10	300x45 LSL10
7200	300x45 LSL10	300x45 LSL10	300x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10	360x45 LSL10 / 300x63 LSL10	400x63 LSL10	200x45 LSL10	200x45 LSL10	200x45 LSL10	300x45 LSL10	360x45 LSL10 / 300x63 LSL10

Note: End Wall Rafters have half the roof load width of single clear span rafters

To be upsized to purlin depth.