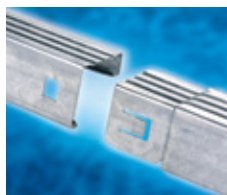


## ACHIEVING OUTSTANDING THERMAL PERFORMANCE IN ROOFING



### Outstanding Thermal Performance & Compliance to Section J

Minimum energy efficiency standards for commercial buildings are now mandatory in the BCA. To ensure your projects provide the required levels of thermal performance using a metal spacer system, Bradford have introduced the new Ashgrid spacer system.



This new Ashgrid spacer system consists of a bar and 2 supporting brackets and is delivered pre-assembled to the site.

The system uses an innovative Safe-Loc™ feature providing stability and peace of

mind at the click of a tab. This prevents the Ashgrid bars from separating during the installation process ensuring safe, precise gauging as well as quicker installation. Once engaged the bar ends cannot be accidentally or unintentionally separated ensuring the system remains stable and secure during the critical installation stages. Nevertheless, the joints can be 'unlocked' if the need arises.

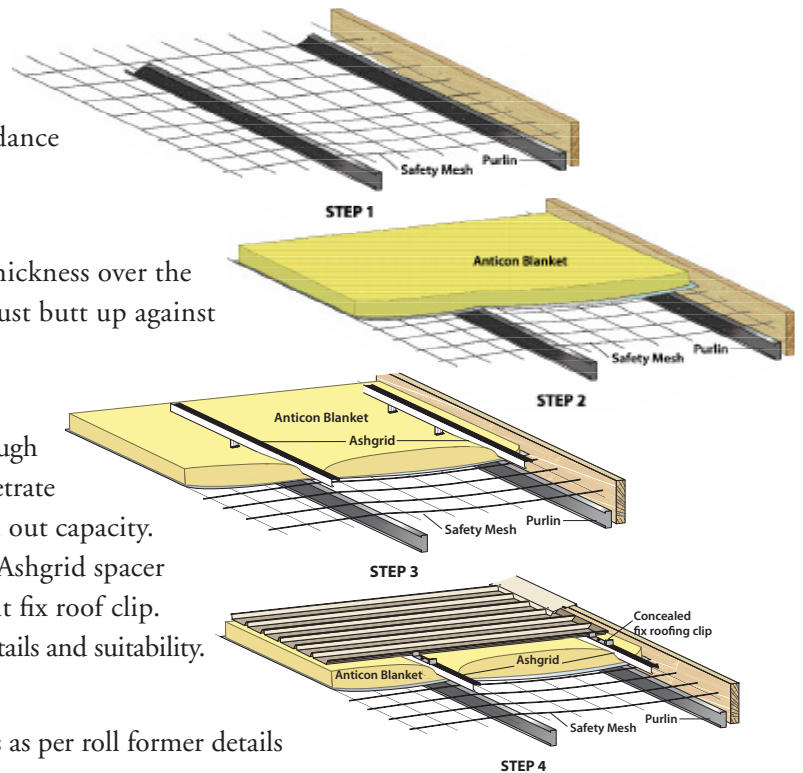
The Ashgrid system also has EPDM base pads on the brackets providing an air and vapour seal at the point of penetration through the vapour control facing layer.

## Ashgrid Spacer Benefits:

- Can be used to achieve (Total System R-Value)  $R_T$  3.2 for warehouse roofs
- Supplied preassembled, for easy installation
- 80mm high brackets ensure insulation recovers to its full design thickness
- New Safe-Loc™ spigots ensure fast, secure and safe bar joints
- Allows continuous load transfer throughout the bar run
- New high performance brackets with deeper ribs for improved structural performance
- Brackets can be easily repositioned to suit fittings
- Compatible with both pierce fixed and conceal fixed roofing systems without the need for endcaps or plugs
- Proven. Ashgrid has been used extensively in Europe providing peace of mind for installers and specifiers.

## Installation:

1. Install the safety mesh over the purlins in accordance with Worksafe requirements.
2. Roll out the Bradford Anticon at the required thickness over the safety mesh. The subsequent rolls of Anticon must butt up against the installed Anticon sheets over the foil lap.
3. First, fix Ashgrid to the purlins using 2 screws through the Ashgrid brackets. Make sure these screws penetrate the purlin at least 3 screw threads for design pull out capacity. Then fix the concealed fix roof clip through the Ashgrid spacer using an appropriate length screw for the relevant fix roof clip. Please refer to the screw manufacturer for design details and suitability.
4. Clip the roof sheeting into conceal fixing brackets as per roll former details



# Load capacity tables

Table 1: Load span table for Ashgrid section

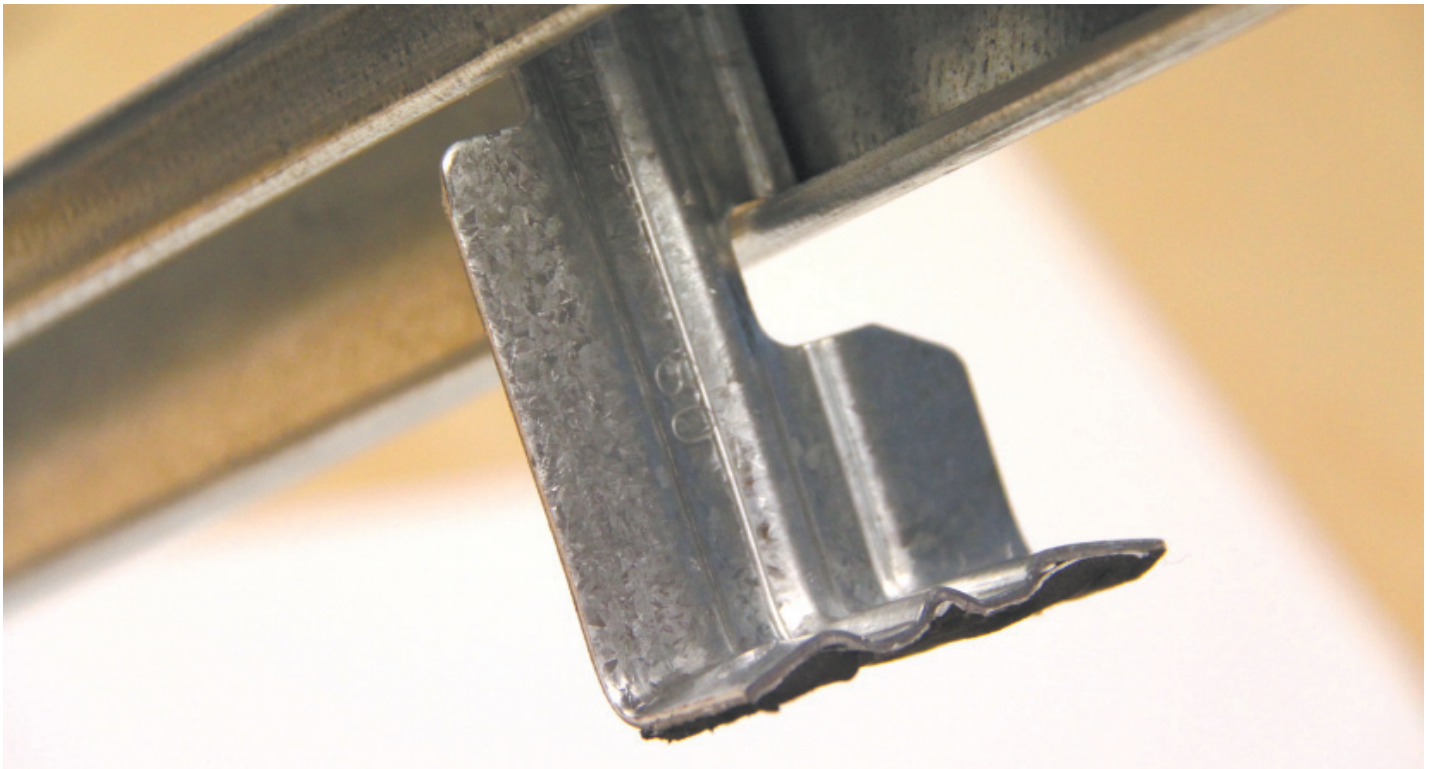
Bar Spacing	Direction of loading	Bracket centres along bar [m]					
		0.5	0.6	0.7	0.8	0.9	1
		Loading [kPa]					
0.3	Download	25.00	20.83	17.86	14.82	11.71	9.49
	Uplift	25.00	20.83	17.86	15.63	13.83	11.21
0.4	Download	18.75	15.63	13.39	11.12	8.78	7.12
	Uplift	18.75	15.63	13.39	11.72	10.38	8.40
0.5	Download	15.00	12.50	10.71	8.89	7.03	5.69
	Uplift	15.00	12.50	10.71	9.38	8.30	6.72
0.6	Download	12.50	10.42	8.93	7.41	5.86	4.74
	Uplift	12.50	10.42	8.93	7.81	6.92	5.60
0.7	Download	10.71	8.93	7.65	6.35	5.02	4.07
	Uplift	10.71	8.93	7.65	6.70	5.93	4.80
0.8	Download	9.38	7.81	6.70	5.56	4.39	3.56
	Uplift	9.38	7.81	6.70	5.86	5.19	4.20
0.9	Download	8.33	6.94	5.95	4.94	3.90	3.16
	Uplift	8.33	6.94	5.95	5.21	4.61	3.74
1	Download	7.50	6.25	5.36	4.45	3.51	2.85
	Uplift	7.50	6.25	5.36	4.69	4.15	3.36
1.1	Download	6.82	5.68	4.87	4.04	3.19	2.59
	Uplift	6.82	5.68	4.87	4.26	3.77	3.06
1.2	Download	6.25	5.21	4.46	3.71	2.93	2.37
	Uplift	6.25	5.21	4.46	3.91	3.46	2.80
1.3	Download	5.77	4.81	4.12	3.42	2.70	2.19
	Uplift	5.77	4.81	4.12	3.61	3.19	2.59
1.4	Download	5.36	4.46	3.83	3.18	2.51	2.03
	Uplift	5.36	4.46	3.83	3.35	2.96	2.40
1.5	Download	5.00	4.17	3.57	2.96	2.34	1.90
	Uplift	5.00	4.17	3.57	3.13	2.77	2.24
1.6	Download	4.69	3.91	3.35	2.78	2.20	1.78
	Uplift	4.69	3.91	3.35	2.93	2.59	2.10
1.7	Download	4.41	3.68	3.15	2.62	2.07	1.67
	Uplift	4.41	3.68	3.15	2.76	2.44	1.98
1.8	Download	4.17	3.47	2.98	2.47	1.95	1.58
	Uplift	4.17	3.47	2.98	2.60	2.31	1.87
1.9	Download	3.95	3.29	2.82	2.34	1.85	1.50
	Uplift	3.95	3.29	2.82	2.47	2.18	1.77
2	Download	3.75	3.13	2.68	2.22	1.76	1.42
	Uplift	3.75	3.13	2.68	2.34	2.08	1.68

Table 2: Bracket to purlin capacities

Screw Gauge	Purlin BMT					
	1.0	1.2	1.5	1.9	2.4	3
	Tensile connection capacity [kN]					
#10g	2.24	2.55	2.94	3.72	4.70	5.88
#12g	2.52	2.86	3.30	4.19	5.29	6.61
#14g	3.00	3.40	3.92	4.97	6.28	6.74

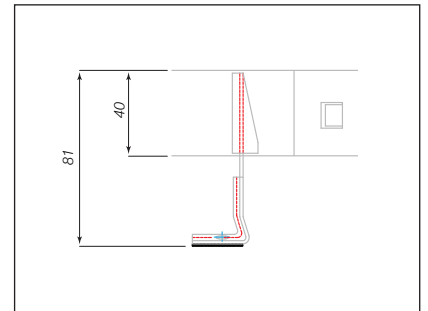
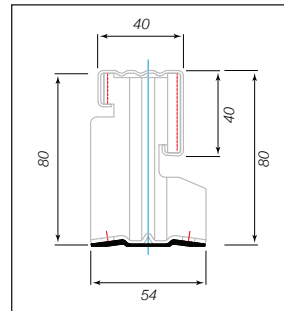
**Table Notes:**

1. All loadings are taken as Ultimate
2. Serviceability limit = span / 150
3. All wind loadings shown are ultimate including all relevant local pressure factors as appropriate (see AS/NZS 1170.2 :2002)
4. The loadings shown above do not include self weight or lateral loading.
5. The capacity of the Ashgrid spacer has been calculated in accordance with AS/NZS 4600: 2005
6. The ultimate capacity of the Ashgrid spacer to clip has been taken as 3.75kN (ie. 3.00 x 1.25)
7. The above strengths are based on 3 span continuous for strength and serviceability.



## Product range

Anticon Product	Blanket Thickness (mm)	Spacer height (mm)
Anticon 55	60	80
Anticon 75	80	80
Anticon 95	100	80
Anticon 100HP	100	80



Ashgrid Spacers are supplied in 1000mm lengths, assembled with 12 lengths in a carton.

**Note:** for total roof performance ( $R_{t1}$ ) refer to Bradford Insulation.

## Material specifications

### Ashgrid Bar

- Manufactured from 1.25mm thick high yield galvanised steel to S390GD + Z275NA-C.
- Coil to EN 10147:2000. Minimum yield: 390N/mm<sup>2</sup> and Minimum tensile: 460N/mm<sup>2</sup>
- Supplied in lengths of 1m incorporating spigot end for easy on-site construction.

### Ashgrid Bracket

- Manufactured from 1.6mm thick galvanised steel FEPO2G + Z275 BS EN 10142.
- Supplied with a 3mm EPDM base thermal insulator pad and standard bracket height is 80mm.

**Bradford**<sup>™</sup>  
for smarter environments

### Bradford Insulation

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