Balhannah Hotel | Adelaide

MODULAR RAFTER SOLUTION FOR ROOFS

FREESPAN SYSTEM

Danpalon
Light Architecture

FREESPAN RAFTERS

Danpalon Multicell provides exceptional quality of light, a rich non-industrial visual appeal and delivers superior durability, thermal insulation and 99.9% UV protection. Danpalon panels with this unique and innovative extrusion technology provide more cells than traditional polycarbonate sheets. The smaller spans between the rib supports give you the best combination of translucency and strength.

SUPERIOR LIGHT AND VISUAL APPEARANCE

The Multicell structure transmits an even diffusion of natural light, producing a rich look similar to glass. Specifically designed for architectural daylight applications, the tight spacing between the ribs produces a superior quality of light and an aesthetically appealing look, offering a refined alternative to the 'green-house look' associated with alternative sheets.

EXTENDED UV PROTECTION

Danpalon Multicell also offers a co-extruded UV protection layer that results in longer panel life. This technology developed by Danpalon means the UV protection is actually part of the sheet so there is no chance of the UV barrier delaminating.

HIGH THERMAL INSULATION

The Danpalon cell structure gives the sheet significantly less thermal conductivity. This results in improved insulation and unparalleled 'U' and 'R' Values. These improved thermal values offer significant energy efficiencies.

HIGH IMPACT RESISTANCE & STRENGTH

Due to the tightness between the vertical supports, Multicell offers the highest resistance to impact and hail damage. The high concentration of cells provides improved mechanical properties and rigidity. This rigidity means better spans giving a more economical solution.

LEGEND

LT % of visible light transmission (400 - 700nm)

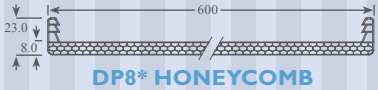
ST % of total solar radiation transmission (300 – 2800nm)

SR % of total solar reflection (300-2800nm)

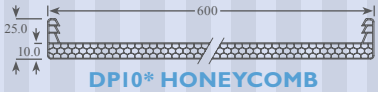
SHGC Solar Heat Gain Coefficient.
Total solar energy transmitted through the panel = %ST+0.2x(%st+%sr). Tests were performed in accordance with ASHRAE 74-1988 procedures. Figures are indicative and may change within manufacturers production tolerances.

SHEET SIZES

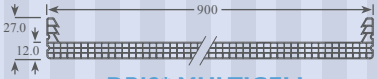
DP4* COMPACT



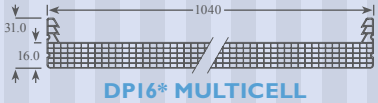
DP8* HONEYCOMB



DP10* HONEYCOMB



DP12* MULTICELL



DP16* MULTICELL

*suit Freespan Rafter Systems

TEST COMPLIANCES

AS1170.1 - 2002	Balustrade Loadings
AS1170.2 - 1989	Wind Loads
AS1530.3 - 2009	Early Fire Hazard Test
AS1562.3 - 2006	Impact Test (includes 10 year old panels)
AS3837 - 1998	Heat and Smoke Release Rates (Fire Group 3)
AS4040.1 - 1992	Resistance to Concentrated Loads
AS4040.2 - 1992	Resistance to Wind (non-cyclonic)
AS4040.3 - 1992	Resistance to Wind (cyclonic)
AS4040.4 - 2006	Resistance to Impact
BCA 2007 B1.2	Cyclonic Regions
BRANZ Appraisal 2006	Certificate 527
ROHS Compliant	Restriction of Hazardous Substance Lic 24727

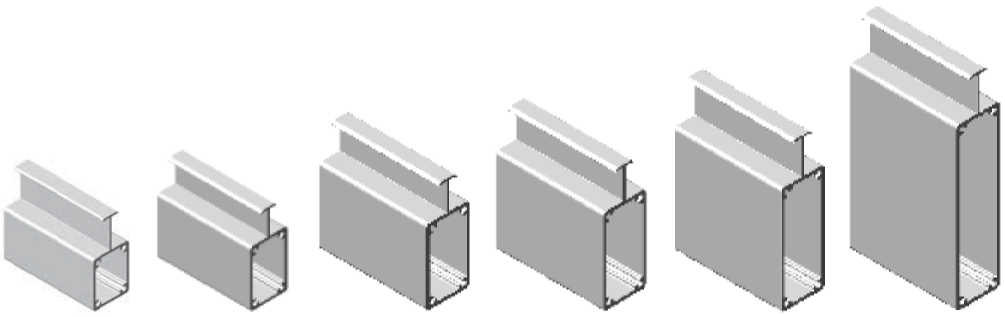
OPTICAL AND SOLAR PROPERTIES

		4mm	8mm	10mm	12mm	16mm
Reflective Colours						
REFLECTIVE GREY	LT%	20	20	20	20	20
	ST%	18	18	18	18	18
	SR%	33	33	33	33	33
	SHGC	0.28	0.28	0.28	0.28	0.28
REFLECTIVE ICE	LT%		24	24	24	
	ST%		34	34	34	
	SR%		48	48	48	
	SHGC		0.38	0.38	0.38	
Standard Colours						
BLUE	LT%	64	50	50	50	49
	ST%	69	57	57	57	51
	SR%	17	27	27	27	38
	SHGC	0.72	0.60	0.60	0.60	0.53
BRONZE	LT%	38	25	25	25	35
	ST%	41	26	26	26	35
	SR%	12	18	18	18	30
	SHGC	0.50	0.37	0.37	0.37	0.42
CLEAR	LT%	89	71	71	71	63
	ST%	80	60	60	60	51
	SR%	17	36	36	36	40
	SHGC	0.81	0.61	0.61	0.61	0.53
GREEN	LT%	75	60	60	60	44
	ST%	69	52	52	50	42
	SR%	17	32	32	32	33
	SHGC	0.72	0.55	0.55	0.55	0.47
GREY	LT%	41	30	30	30	31
	ST%	51	35	35	35	38
	SR%	12	22	22	22	30
	SHGC	0.58	0.44	0.44	0.44	0.44
ICE	LT%	55	60	60	60	51
	ST%	58	54	54	54	50
	SR%	26	32	32	32	38
	SHGC	0.61	0.57	0.57	0.57	0.52
OPAL	LT%	40	35	35	35	22
	ST%	44	38	38	38	28
	SR%	35	40	40	40	51
	SHGC	0.48	0.42	0.42	0.42	0.32
Premium Colours						
DARK OPAL	LT%		11	11	11	
	ST%		18	18	18	
	SR%		53	53	53	
	SHGC		0.24	0.24	0.24	
GOLD	LT%		25	25	25	28
	ST%		23	23	23	27
	SR%		31	31	31	28
	SHGC		0.32	0.32	0.32	0.36
ORANGE	LT%		40	40	40	36
	ST%		45	45	45	39
	SR%		15	15	15	24
	SHGC		0.53	0.53	0.53	0.46
PURPLE	LT%		44	44	44	32
	ST%		55	55	55	43
	SR%		20	20	20	27
	SHGC		0.60	0.60	0.60	0.49
RED	LT%		20	20	20	18
	ST%		45	45	45	39
	SR%		22	22	22	24
	SHGC		0.51	0.51	0.51	0.46
YELLOW	LT%		58	58	58	50
	ST%		52	52	52	45
	SR%		26	26	26	26
	SHGC		0.56	0.56	0.56	0.50

SPECIFICATIONS

	DP4	DP8	DP10	DP12	DP16
WIDTH (mm)	592	600	600	900	1040
RAFTER SPACING (mm)	600	602	602	902	1042
MIN. ROLLFORMING RADIUS FOR RAFTER	3000	3000	3000	5000	3000
U VALUE ($w/m^2C°$)	5.36	2.46	2.11	1.84	1.53
R VALUE ($w/m^2C°$)	0.19	0.41	0.47	0.54	0.65
WEIGHT (g/m^2)	5000	1830	2666	2840	3666

FREESPAN ACCESSORIES



Freespan Rafter 50mm
To suit DP16

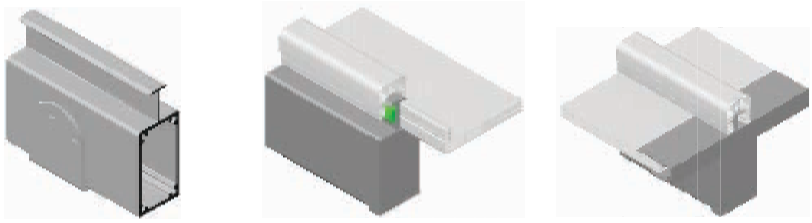
Freespan Rafter 60mm
To suit 8/10mm

Freespan Rafter 70mm
To suit 8/10mm

Freespan Rafter 80mm
To suit 10/12mm

Freespan Rafter 100mm
To suit 16mm

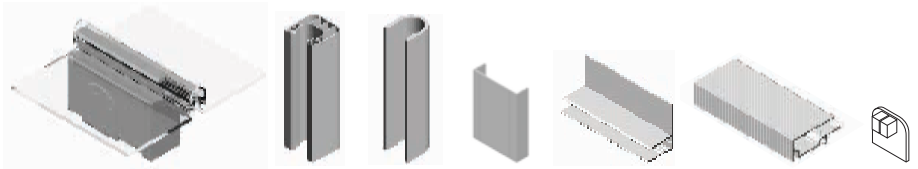
Freespan Rafter 150mm
To suit 16mm



Saddle Bracket Attachment

Side Detail

Assembly



DP4 Detail

Connector
Poly Std

Connector
Poly 4mm

Bar End Cap
60mm to 150mm

F Section
8mm to 16mm

End Cap
8mm to 16mm

Connector
End Cap
Poly

FORMAT AND SPANS

	DPAB50	DPAB60	DPAB70	DPAB80	DPAB100	DPAB150
SPACING	1040	600	600	900	1040	1040
MAX. STRAIGHT SPAN	3600	5500	6500	6500	7000	8000
MAX. CURVED SPAN	4000	6000	7000	7000	8300	N/A

These spans are based on a design wind speed of 33 m/s. For higher loads, please contact your local distributor for advice.

Broadway Shopping Centre | Sydney

Danpal Australia Pty Ltd

NSW	61-2-9475 2000	SA	61-8-8337 6599
QLD	61-7-3290 5222	WA	61-8-9279 1064
VIC	61-3-9459 4806	NZ	64-9-412 7470
TAS	61-3-6344 7060		

Your Danpalon Specialist is:

www.danpalon.com.au

NATSPEC ProductPartner

ecospecifier as seen on www.ecospecifier.org