



DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### **KEY FEATURES / PERFORMANCE CHARACTERISTICS**



- Series 730 incorporates ThermalHEART<sup>™</sup> technology giving a true wide thermal break between the outside and inside faces. WERS (Window Energy Rating System) data shows that using the same IGU in a ThermalHEART<sup>™</sup> Bi-fold door is 32% more efficient than a standard non-thermally broken Bi-fold door.
- A major advantage with ThermalHEART<sup>™</sup> in cold climates is the reduction in internal condensation. This saves potential damage to timber reveals and paint finishes. ThermalHEART<sup>™</sup> is also suitable for hot climates.
- We offer ThermalHEART<sup>™</sup> in a range of stocked colours including dual colour ClearMIST<sup>™</sup> contact your local Vantage fabricator for details.
- Running bi-fold doors on bottom rollers reduces the problems caused by lintel sag and allows us to offer optional highlights.
- This bi-fold door has been tested for compliance with the relevant Australian Standards and achieved a high water resistance of 380Pa, this makes the product suitable for most residential applications.
- Low air infiltration, makes the product suitable for air conditioned buildings.
- The extra strong door stiles allow over size door panels to be fabricated, refer Pascal rating tables later in these notes.
  - Sharp square external glazing beads are standard.
  - 100mm frame and transom have a soft 2mm internal radius.

Maximum Panel Height*	2600mm
Maximum Panel Width*	900mm
Maximum Glass Thickness	≤ 32mm

Series 730 ThermalHEART™

Bi-fold door internal view

\* Subject to individual site conditions and wind loads. Contact AWS Technical Support for more information, e-mail techsupport@awsaustralia.com.au

#### **TYPICAL CONFIGURATIONS**







### SOUND REDUCTION

A number of glass combinations have been tested in a similar door system. Panel stiles were fitted with co-extruded Santoprene fin seals.

Glass Description		
6.38mm Laminated glass	3 I dB(A)	RVV32
19mm Insulating glass unit	32dB(A)	RVV33



#### VERS RATINGS

#### **Double Glazed**

Glass Description	COOLING	HEATING	Uw	SHGCw	Tvw	Inf
4AZ/10Gap/4EA	67%	<b>39%</b>	2.8	0.26	0.38	0.64
4Clr/10Ar/4EA	55%	50%	2.6	0.44	0.45	0.64
4Clr/10Gap/4Clr	50%	44%	3.3	0.47	0.49	0.64
4Clr/10Gap/4EA	55%	48%	2.8	0.44	0.45	0.64
5Clr/8Gap/5Clr	51%	43%	3.3	0.46	0.48	0.64
5EG/8Ar/5EA	67%	<b>39%</b>	2.7	0.26	0.37	0.64
6Clr/12Gap/6Clr	52%	44%	3.2	0.44	0.47	0.64
6EG/12Gap/6Clr	65%	33%	3.2	0.26	0.35	0.64
6Clr/12Gap/6EA	56%	48%	2.8	0.42	0.44	0.64
6EG/12Gap/6EA	69%	36%	2.8	0.23	0.33	0.64

AUG 20 DATE: REPLACES: NOV 09 SCALE:

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#### **HOW TO SPECIFY**

#### SYSTEM NAME

Vantage Series 730 Thermal HEART™ Bi-fold door

#### **FINISH**

Powder Coat

Anodised

#### COLOUR

Select from the ThermalHEART range of approved powder coat or anodising colours. Dual colour options available.

#### GLASS

Specify thickness  $\leq$  32mm

Specify thermal performance where applicable (Uv & SHGC)

Specify acoustic performance where applicable (RW)

#### HARDWARE

Refer to hardware selection guide for compatible options



**Specification** Assistance

Need help specifying this product? email techsupport@ awsaustralia.com.au and our qualified technical advisors will assist you with product selection and specification for your project.



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GO TO: www.specifyaws.com.au CAD file: DWG and PDF 729.BFLD



For the latest updates regarding this product visit our website www.specifyaws.com.au

DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### SPECIFIERS CHECKLIST

Not all Bi-fold doors are the same. If you want your doors to perform, keep the elements on the outside where they belong and operate smoothly for years to come there are some things you should check/compare when choosing your supplier - compare us with the others.

FEATURE	Series 730	Opposition
<b>Is the frame and door panel thermally broken?</b> Series 730 is 32% more thermally efficient than non-thermally broken bi-fold with the same insulating glass unit.	YES	
Has Series 730 been WERS rated?	YES	
Heavy duty perimeter frame The multi hollow perimeter frame is designed to support the heavy double glazed door panels.	YES	
Series 730 can be supplied in dual colour?	YES	
<b>Does the bi-fold door run on bottom rollers?</b> Series 730 bottom rollers will run smoother longer. More clearance for lintel sag. Less chance of problems.	YES	
Will the Bi-fold door keep the water out - has it been tested? The Vantage Series 730 Bi-fold door system has been successfully tested to keep water out. Open out bi-fold door will resist up to 380Pa of water. If sliding doors have to comply so should hinged and Bi-fold doors in our opinion.	YES	
Are the door jambs strong enough to support the door? The Vantage Series 730 doors are hinged off a heavy duty double tubular jamb with thickened webs where hinges are attached. If the jamb is not strong enough, nothing you can do in the future will make the door perform.	YES	
<b>Can the frame have highlights (overlights)?</b> As the weight is carried at the sill Series 730 has a range of transom details.	YES	
<b>Can the door panels and fixed sidelights/highlights be double glazed?</b> The heavy duty door panels are capable of carrying up to 32mm thick insulating glass.	YES	
Can Series 730 bi-fold doors be fitted with flydoors? We can fit roller screen/s behind folding door panels.	YES	
<ul> <li>High quality hardware</li> <li>Heavy duty custom hinges designed to suit the door and frame without having to fit shims etc.</li> <li>Centre hinge between folding door panels has built-in handle to allow easy panel closing.</li> <li>Quad bogey wheel carriage designed to carry the load.</li> <li>316 Stainless steel roller cowling available for high risk areas near the sea.</li> <li>Folding panels locked in the closed position with heavy duty custom flush bolts (finger, lever or key operated)</li> <li>Custom injection moulded lock keepers remove the need for ugly shims and cutouts in the stiles and / or frame.</li> <li>Specially designed backing plate at the four corner joints of the door. These take the "sloppiness" out of corner joints and make sure that the door stays rigid and square. Compare our door with others available and you will see what we mean about strength and rigidity.</li> <li>Co-extruded Santoprene door stop seal.</li> <li>Custom designed ICON™ and MIRO™ bi-fold activators and lever locksets available.</li> <li>ICON™ Hardware is manufactured form 316 grade Stainless Steel - ideal for costal applicatons.</li> </ul>	YES	

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#### **DESIGN FEATURES**

Series 730 incorporates ThermalHEART<sup>™</sup> technology giving a true wide thermal break between the outside and inside faces. WERS (Window Energy Rating System) data shows that using the same IGU in a ThermalHEART<sup>™</sup> Bi-fold is 32% more efficient than a standard non-thermally broken Bi-fold door.

A major advantage with ThermalHEART<sup>™</sup> in cold climates is the reduction in internal condensation. This saves potential damage to timber reveals and floor finishes. ThermalHEART<sup>™</sup> is also suitable for hot climates.

We offer ThermalHEART<sup>M</sup> in a range of stocked colours including dual colour ClearMIST<sup>M</sup> contact your local Vantage fabricator for details.

Running bi-fold doors on bottom rollers reduces the problems caused by lintel sag and allows us to offer optional highlights.

This bi-fold door has been tested for compliance with the relevant Australian Standards and achieved a high water resistance of 380Pa, this makes the product suitable for most residential applications.

Low air infiltration, makes the product suitable for air conditioned buildings.

The extra strong door stiles allow over size door panels to be fabricated, refer Pascal rating tables later in these notes.

Sharp square external glazing beads are standard.

100mm frame and transom have a soft 2mm internal radius.

Doors can be fitted with a variety of custom lever and bi-fold activator sets (ICON<sup>TM</sup> or MIRO<sup>TM</sup>) with Lever Compression Lock (LCL) motor as standard. After closing the door panel you can lift the handle to activate the compression feature. This throws bolts into head and sill and deploys the central locking bolt. The individual features of both furniture sets are shown later in this section.

 $\mathsf{ICON^{\textsc{tm}}}$  lever sets are only available in 316 Stainless steel finish.

The door frame is compatible (appearance, strength and performance) with the high performance ThermalHEART<sup>™</sup> awning window. We have light and heavy 180° couplers that will joint windows to doors without unsightly rivets or screws while maintaining the thermal break.

Panels are hung on heavy duty custom hinges, refer details later in this section.

Panels and sidelights will accept a variety of glass thicknesses from 4mm single panes to 32mm insulating glass units.

All of the important features are shown in full colour at: **www.specifyaws.com.au** 



DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### LIMITATIONS





Most of the features on this product can be seen in full colour on our web site: www.specifyaws.com.au



DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

### **TYPICAL CONFIGURATIONS**





S	=	Serviceability	limit state	(deflection =	L/150).
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**U** = Ultimate strength limit state (factored yield strength = 104 MPa).

These tables have been calculated using nominal section properties. A typical assembly has been tested as per the requirements of AS2047,  $\,$ 

Ultimate strength rating has been limited to 4500 Pa.

2200 Serviceability ratings were restricted by the maximum water resistance (300Pa) achieved on this product.

Door Dir	Door Dimensions		Ratings		
Frame Height	Panel Width	Serviceability	Serviceability	Ultimate	
mm	mm	1/150	1/180		
2100	800	2200 Pa	1915 Pa	4500 Pa	
2100	900	20 <b>79</b> Pa	1732 Pa	4500 Pa	
2200	800	1973 Pa	1644 Pa	4393 Pa	
2200	900	1782 Pa	1485 Pa	3958 Pa	
2300	800	1706 Pa	1422 Pa	3985 Pa	
2300	900	1539 Pa	1283 Pa	3586 Pa	
2400	800	1487 Pa	1239 Pa	3631 Pa	
2400	900	1339 Pa	III6 Pa	3264 Pa	
2500	800	1303 Pa	1086 Pa	3324 Pa	
2500	900	1172 Pa	977 Pa	2985 Pa	
2600	800	1149 Pa	957 Pa	3054 Pa	
2600	900	1033 Pa	860 Pa	2740 Pa	

Wind Ratings (Pa) Meeting stiles.



type. **BFD3 + 3** 



DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

### **TYPICAL CONFIGURATIONS**

Width > 1123mm <= 1894mm



Width > 2121mm <= 3720mm





Width > 2139mm <= 3677mm



Internal operation only





Width > 2151mm <= 3692mm



type. BFD2+2

Width > 2631mm <= 4632mm



#### **Opening Direction**

On Bi-fold doors that open to one side only it's critical that the opening direction is clearly specified on the drawing.



#### **TYPICAL CONFIGURATIONS**



More Series 730 Bi-fold doors.

DATE:

SCALE:

REPLACES:

AUG 20

NOV 09

NOT TO SCALE

### type. BFD1+5 BFD5+1 illustrated

BFD1+5 Indicates that there are a total of six panels, one hinged on the left side and the other five folding to the right. Always viewed from the outside.

type. BFD2+4



BFD4+2 illustrated

type. **BFD6** 

**Chair rails** 

All hinged and Bi-folding doors can be fitted with 76mm chair rail. Likewise the adjoining fixed sidelights can have chair rails to match.





DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### HARDWARE MAKES THE DIFFERENCE



### **Overhead roller guide**

- Finishes available:
- Black
- Clear anodised
- Pearl white
- AWS Silver
- Special paint

This head guide is retained in the guide channel in the head / transom.

Guide hinge leaves secured to door stile with stainless steel screws.





### Quad bogey sill roller

- finishes available:
- Black.
- Clear anodised with 316 stainless steel roller cowling.
- Pearl white.
- AWS Silver.
- Special paint with coloured cowling.
- Special paint with 316 stainless steel roller cowling.

The heavy duty sill rollers are designed to support heavy door panels (up to 60Kg). As the bi-fold doors can be double glazed the panels will get heavy.

Fitting the load carrying rollers on the bottom allows us to make the door panels bigger  $(2600 \times 900$ mm maximum door panel size) depending on the design wind load.

The rollers are running on double sill track. The cover cowling sweeps the sill clean as doors are opened and closed.

DATE: AUG 20 REPLACES: NOV 09 SCALE:

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#### HARDWARE MAKES THE DIFFERENCE

### Jamb Hinge

Designed to allow door panels to open 90°.

Hinge frame leaf fixed through reinforced portions of frame with 10# countersunk stainless steel self tapping screws.

The hinge-leaves nest into the frame and stile removing the need for unsightly shims, maximise strength and to ensure that the gap between frame and stile are maintained.

finishes available:

- Black
- Clear anodised
- Pearl white
- AWS Silver
- Special paint





The hinge-leaves nest into the stiles removing the need for unsightly

finishes available:

- Black
- Clear anodised
- Pearl white
- AWS Silver
- Surfmist

shims and to ensure that the gap between frame and stile is maintained.

- Special paint

### Handle Hinge

This hinge with inbuilt pull handle is located centrally between projecting, folding door stiles to enable these stiles to be pulled back to the frame (closed position).

The pull handle folds back flush with the panels when not in use.

- finishes available:
- Black

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- Clear anodised
- Pearl white
- AWS Silver
- Surfmist
- Special paint







#### HARDWARE MAKES THE DIFFERENCE

### Standard ICON™ Lever Compression Lock

finishes available:

316 Stainless steel

#### Notes:

Four point locking has the centre latch tongue and throw bolt plus shoot bolts top and bottom.

To activate the lever compression (multi-point locking) feature turn the internal lever handle vertical, this activates the central locking tongue and pushes the shoot bolts into head and sill keeper.

Turning the key locks the central bolt and the top and bottom shoot bolts into position.







DATE: AUG 20 REPLACES: NOV 09 SCALE:

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DATE: REPLACES: NOV 09 SCALE:

AUG 20 NOT TO SCALE

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#### HARDWARE MAKES THE DIFFERENCE

#### Standard

#### Lever operated shoot bolt

finishes available:

• 316 Stainless steel

This bi-fold activator handle has been designed to match ICON<sup>™</sup> lever set.

The lever operated bolt systems activate both top and bottom bolts by turning the lever handle 90°.

Key locking activator set shown on this page. We also offer a non-key option.

Moulded nylon bolt guide ensures that the shoot bolt sits snugly in the door stile and the flat spot on the bolt locks into the flat spot on the guide. This prevents the bolt from moving (dropping) after installation.

Stainless steel bolt tips.





### VERTICAL CROSS SECTION - RECESSED SILL INTO BRICK VENEER WALL



**Brick veneer construction** 



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#### **RECESSED SILL - INTERNAL VIEW**



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#### VERTICAL CROSS SECTION - CAVITY BRICKWALL WITH RECESSED SILL



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### HORIZONTAL CROSS SECTION





### VERTICAL CROSS SECTION - FLAT RECESSED SILL INTO CAVITY BRICK WALL





DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### **FLAT SILL - EXTERNAL VIEW**



The height adjustable galvanised building-in lug securely supports the frame to brick

The double hollow thermally broken perimeter frame is designed to support the weight of door panels. The jamb is reinforced at hinge fixing locations.

#### 24mm IGU illustrated.

The flat sill allows clean unobstructed access but has no water resistance and the gap under the door reduces the thermal transmission values. We recommend that this type of sill detail would be fitted in an under cover area.We also offer a fringe seal that can be fitted to the bottom of door rails to reduce air infiltration.



DATE AUG 20 REPLACES: NOV 09 SCALE:

NOT TO SCALE

### **CENTOR SCREEN PRODUCTION FEATURES**

By far the largest and most robust retractable screening system on the market. The detail in this section show the screen fitted behind Series 730 Thermal Heart™ bi-fold door. The screen can be fitted to any of the Thermal Heart<sup>™</sup> bi-fold door configurations including the maximum opening 'XXF', 'FXXXXF' up to 8887mm wide (with Standard weave mesh).

The S4 screen frame can be coloured to match the Thermal Heart<sup>™</sup> bi-fold door frame.

Load Balancing Technology<sup>™</sup> (LBT<sup>™</sup>) allows for effortless fingertip control. With no spring-loading to fight against, the screen's lead-stile remains firmly in any chosen position until further pressure is applied. Load-balancing also means far greater mesh tension across the screen, eliminating any tendency to sag.

Tight Technology<sup>™</sup> manufacturing techniques ensure control of the horizontal edges of the screen so they remain straight and tight across the widest spans.

A shock absorption system allows visitors taken in by the screen's unobtrusiveness and near invisibility to walk away with little more than a surprise.

Should strong winds blow the screen out of the top or bottom channels the mesh will self-feed back onto the roll as it is rolled away.

The S4 screen is an evolution of the highly successful S1 screen with completely redesigned operating system including top and bottom tabs on the mesh to improve blowout resistance and allow blockout blinds to be added.

S4 is manufactured in stainless steel and reinforced engineered polymers. PetScreen Lite, the tough PVC coated polyester mesh used in the screen, is hard wearing and resistant to damage from pets and children. The mesh is easy to clean and can be replaced if damaged (service call required).

Large size screens available 3200mm high x 461 lmm wide single or 9013mm wide double bi-parting screens (with Standard weave mesh). It's possible with a cavity sliding door and the S4 screen to get about 95% clear opening.



#### Screen Maintenance

Screen fabric should be cleaned with a soft brush or a damp soft cloth.

Tracking should be regularly cleaned to prevent the build-up of dirt and debris.

A vacuum cleaner fitted with a nozzle is effective. The S4 has an "easy fit" sill cover to facilitate simple cleaning and maintenance by the homeowner.

Operating mechanisms are fully contained and do not require maintenance other than keeping clear of dirt and debris.



DATE: AUG 20 REPLACES: NOV 09 NOT TO SCALE SCALE:

### VERTICAL CROSS SECTION WITH OPTIONAL FLY-DOOR

#### MAXIMUM STANDARD WEAVE SCREEN FRAME HEIGHT

Standard Weave mesh	3200mm
	520011111
Tight Weave mesh	3200mm
Air Weave mesh	3200mm
Boston Blockout	3002mm
Boston Light-filtering	3002mm
Tuscany Blockout	3002mm
Tuscany Light-filtering	3002mm
Sunfilter	3200mm

The door can't support the structure. Lintels and headers must be capable of supporting the weight of wall and roof over.

On this detail, the frame has been positioned to allow internal lining to be nested into the flydoor head

Perimeter frame screwed to structure through access holes that are then covered with threshold/

Recessing sill is crical when using accompanying flydoor frame



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DATE:	AUG 20
REPLACES:	NOV 09
SCALE:	NOT TO SCALE

### HORIZONTAL CROSS SECTION WITH OPTIONAL FLY-DOOR

The dimensions shown on this drawing are for flush jamb detail as drawn.

\*\* NOTE

There are two types of bi-fold doors (BFD3 & BFD5) with double screens that will require 35mm rebated canisters. 63mm will change to 98mm 126mm will change to 196mm 159mm will change to 220mm



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DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### HORIZONTAL CROSS SECTION - S4 SCREEN BEHIND 2 PANEL BI-FOLD



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#### HORIZONTAL CROSS SECTION - S4 SCREEN BEHIND 3+1 PANEL BI-FOLD

2 73 63 Stud Opening Width = W + 150 O/A Screen Width = W + 126 O/A Frame Width W 75 63 2

Bi-fold doors with equal number of panels using a single screen have to be less than 4485mm wide with Standard weave mesh.

The BFD3+1 shown on this drawing falls into these paramaters.

The screen canister is secured to the Bi-fold jamb with double sided tape.

75mm wide 5mm thick galvanised mild steel building-in lugs @ 450mm max. cts. These lugs are screwed to Bi-fold frame before installation.



DATE: AUG 20 REPLACES: NOV 09 NOT TO SCALE SCALE:

#### HORIZONTAL CROSS SECTION - S4 SCREEN BEHIND 3 PANEL BI-FOLD

278 250 95 2 75 63 Stud Opening Width = W + 150O/A Screen Width = W + 126 O/A Frame Width W The screen canister is secured to the Bi-fold jamb 63 75 with double sided tape. 2 75mm wide 5mm thick galvanised mild steel building-in lugs @ 450mm max. cts. These lugs are screwed to Bi-fold frame before installation.

Bi-fold doors with unequal number of panels using a double screen, when the bi-fold frame width exceeds 4485mm and less than 8817mm with Standard weave mesh.

Doors that could fall into these parameters are: • BFD5 (width >4485 <=8817mm)

• BFD3 with Combo screen (width <4485 )

DATE: AUG 20 REPLACES: NOV 09 SCALE:

NOT TO SCALE

### HORIZONTAL CROSS SECTION - S4 SCREEN BEHIND 4 PANEL BI-FOLD



Bi-fold doors with unequal number of panels using a single screen have to be less than 4485mm wide with Standard weave mesh.

Doors that could fall into these parameters are:

The screen canister is secured to the Bi-fold jamb with double sided tape.

75mm wide 5mm thick galvanised mild steel building-in lugs @ 450mm max. cts. These lugs are screwed to Bi-fold frame before installation.



DATE: AUG 20 REPLACES: NOV 09 SCALE: NOT TO SCALE

#### HORIZONTAL CROSS SECTION - S4 SCREEN BEHIND 3 PANEL BI-FOLD

278 Bi-fold doors with unequal number of panels using a single screen have to be less than 4485mm 250 wide with Standard weave mesh. Doors that could fall into these parameters are: 12 • BFD3 • BFD5 0 98 P Stud Opening Width = W + 220O/A Screen Width = W + 196 O/A Frame Width W Screen canister rebated 35mm on BFD3 and BFD5 doors fitted with double screens as shown below. 35 The screen canister is secured to the Bi-fold jamb 0 with double sided tape. 98 12 75mm wide 5mm thick galvanised mild steel building-in lugs @ 450mm max. cts. These lugs are screwed to Bi-fold frame before installation.



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REPLACES:	NOV 09
SCALE:	NOT TO SCA

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#### **HIGHLIGHT COUPLERS**

We have thermally broken couplers that will join awning frame to hinged or bi-fold doors as shown below. Couplers can be used vertically or horizontally.

#### Typical strength examples:

With an awning frame 600mm high over a door 2400mm high by 3600mm wide Standard coupler 72240 would rate 1618Pa Serviceability (1/150) 2688Pa Ultimate. Heavy coupler 72241 would rate 2529Pa Serviceability (1/150) 4688Pa Ultimate. Extra Heavy coupler 72242 would rate 3333Pa Serviceability (1/150) 5000Pa Ultimate.

From this you can see that the standard coupler would suit most projects and the heavy coupler would get used on wider bi-fold or sliding doors or tall vertical couplers in higher wind load areas.



72240 20 더 ¢ 5 ſÇ

Awning highlight

Hinged door

O/A Frame	Door	Window	Service	Service	Ultimate
Width	Lowlight	Highlight	1/150	1/180	
mm	mm	mm			
2400	2100	600	3333	3333	5000
2700	2100	600	3333	3333	5000
3000	2100	600	2899	2620	4348
3300	2100	600	2295	1913	3502
3600	2100	600	1730	1442	2888
3900	2100	600	1339	1115	2425
4200	2100	600	1058	881	2067
2400	2400	600	3333	3333	5000
2700	2400	600	3333	3333	5000
3000	2400	600	2746	2494	4118
3300	2400	600	2162	1802	3284
3600	2400	600	1618	1348	2688
3900	2400	600	1244	1037	2245
4200	2400	600	979	815	1905
2400	2700	600	3333	3333	5000
2700	2700	600	3333	3333	5000
3000	2700	600	2657	2422	3985
3300	2700	600	2075	1729	3137
3600	2700	600	1538	1281	2544
3900	2700	600	1174	979	2110
4200	2700	600	919	766	1782



 DATE:
 NOG 29

 REPLACES:
 NOV 09

 SCALE:
 NOT TO SCALE

### **HIGHLIGHT COUPLERS**

O/A Frame	Door	Window	Service	Service	Ultimate
Width	Lowlight	Highlight	1/150	1/180	
mm	mm	mm			
3600	2400	600	2529	2108	4688
3900	2400	600	1945	1621	3619
4200	2400	600	1530	1275	3324
4500	2400	600	1226	1022	2860
4800	2400	600	999	832	2488
3600	2700	600	2404	2003	4437
3900	2700	600	1836	1530	3681
4200	2700	600	1436	1197	3109
4500	2700	600	1146	955	2664
4800	2700	600	930	775	2310

Wind Ratings (Pa) 72241





O/A Frame	Door	Window	Service	Service	Ultimate
Width	Lowlight	Highlight	1/150	1/180	
mm	mm	mm			
4500	2400	600	2085	1737	3379
4800	2400	600	1698	1415	2940
5100	2400	600	1402	1169	2583
5400	2400	600	1172	977	2288
5700	2400	600	990	825	2042
4500	2700	600	1949	1624	3147
4800	2700	600	1582	1318	2730
5100	2700	600	1302	1085	2392
5400	2700	600	1086	905	2114
5700	2700	600	915	763	1883

Wind Ratings (Pa) 72242

