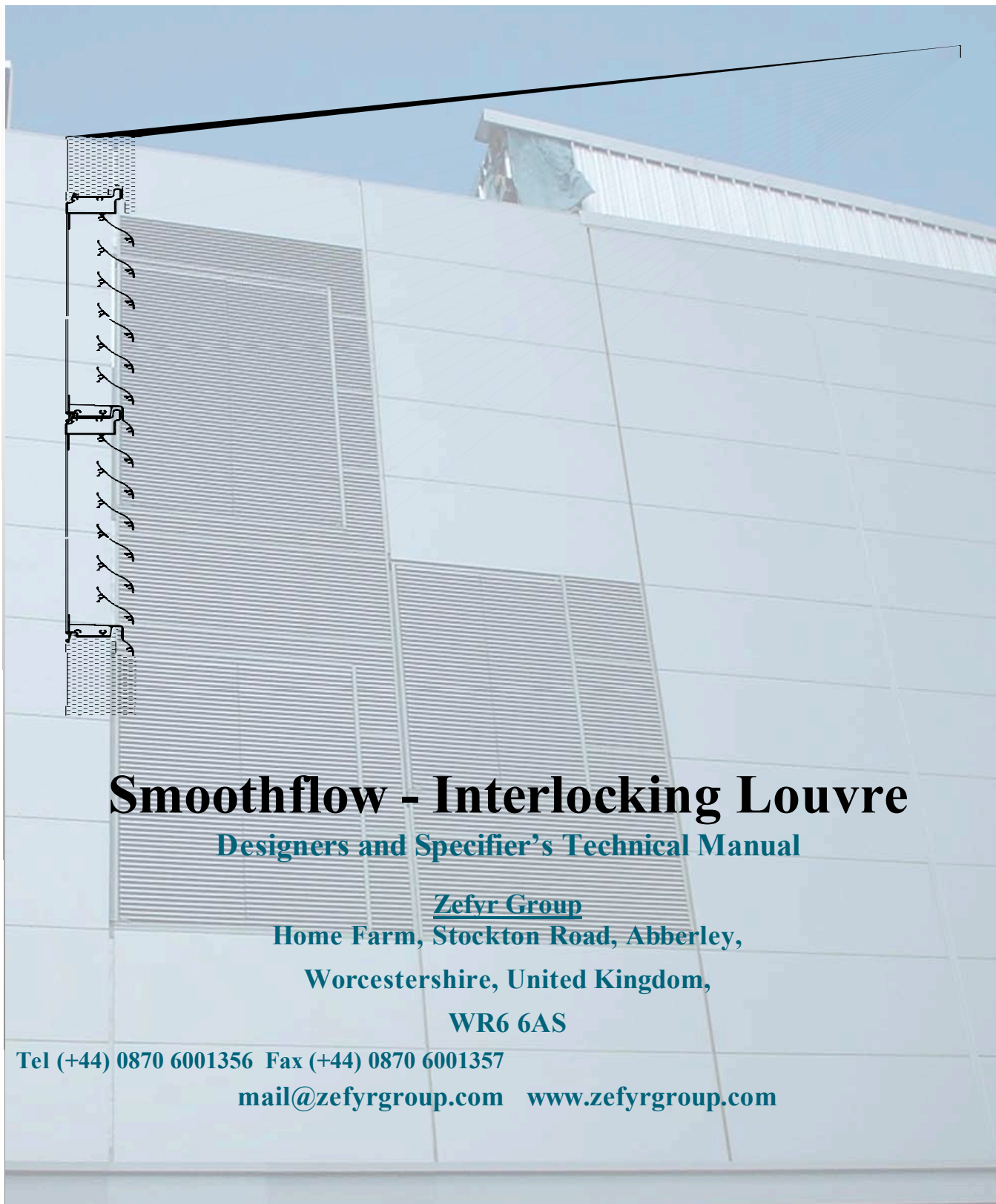




*“Innovative building solutions
for a sustainable environment”*



Smoothflow - Interlocking Louvre

Designers and Specifier's Technical Manual

Zefyr Group

Home Farm, Stockton Road, Abberley,

Worcestershire, United Kingdom,

WR6 6AS

Tel (+44) 0870 6001356 Fax (+44) 0870 6001357

mail@zefyrgroup.com www.zefyrgroup.com

Zefyr Kingspan Interlocking Louvre System



Aesthetic Features

Designed to fully integrate with Kingspan's horizontal modular cladding systems. For full details refer to Appendix A or the Zefyr Designers CD.

(Both available on request to Zefyr , or downloadable from "Download" section at www.zefyrgroup.com).

- **Curved front blades fitted within the depth of the louvre panel**
- **Supplied in panels up to 6.0m wide and 1.2m high**
- **Uninterrupted blades up to 6 m long**
- **No visible fixings**
- **Interface details are identical to the Kingspan panels.**
- **No perimeter flashings.**
- **No additional steelwork.**
- **Integrated door system**

Performance

Louvre profiles have been fully proven in independent laboratories and in installations worldwide. Refer to Appendix B

- **Structural Testing**
- **Aerodynamic Testing**
- **Weather Testing**

Installation

Design to be installed as a part of the cladding system; the Zefyr Kingspan panels should be installed as if it were a Kingspan panel.

Technical Support

Zefyr offer a world-class design service through Zefyr Consultants Ltd in the UK and via its technical offices located worldwide. Contact Zefyr directly, or visit www.zefyrgroup.com, for further details

Case Studies

Refer to Appendix C for details.

Quotation / Order Forms

Refer to Appendix D for blank forms. Simply complete the form and submit to Zefyr for quotation / supply of materials.

ZEFYR - KINGSPAN INTERLOCKING LOUVRE SYSTEM – THE COST SAVING SOLUTION

- **NO ADDITIONAL SECONDARY STEELWORK – COST SAVING**
- **NO UGLY PERIMETER FLASHINGS – COST SAVING**
- **NO FLASHINGS TO SEAL / MAINTAIN – CAPITAL AND ONGOING MAINTENANCE COSTS**
- **QUICK TO INSTALL – COST SAVING**
- **SINGLE RESPONSIBILITY - INSTALLED AS PART OF CLADDING SYSTEM BY ONE CONTRACTOR**

General Specification

The following apply to the entire range of Smoothflow Interlocking louvres:

Zefyr Group

Home Farm, Stockton Road, Abberley, Worcestershire, WR6 6AS, UK. Tel +44 (0)870 600 1356 Fax +44 (0)870 600 1357
E-mail mail@zefyrgroup.com website www.zefyrgroup.com

Zefyr Kingspan Interlocking Louvre System



Material

Manufactured in first quality aluminium.

Dimensions

Panel Width up to 6000mm.

Module Height up to 1250mm (multiple of 50mm)

Panel thickness – 45mm, 60mm, 70mm, 80mm, 120mm – or others on request.

Structural Integrity

Max Span between vertical supports (as per composite panel) – 3.0m

Finishes

Mill finish, polyester powder-coated or PVF2 coated to any British Standard, RAL or Zefyr colours.

Blades and Panel Interlock

Manufactured from extruded aluminium BS 1474 - 6063T6.

Blade Profiles / Configuration

Blade profiles can be used as single pass or double pass louvres or as double pass operable louvres.

Blade Clip

Versatile clip device allows for choice of pitch arrangement.

Blade Pitch

50mm vertical spacing with measured free area of 52% through the blades

Framing

Press formed aluminium steel 2mm thick to BS 1470 - 1050 H14.

Fasteners

Either aluminium or stainless steel.

Corners

Internal and external to suit angles and produced from parent blade material.

Performance

Blade design has been tested for structural and aerodynamic performance to provide optimum spanning and pressure loss characteristics.

Bird Screen

Available as an optional extra in 12 X 12mm square mesh, PVC-coated galvanised steel. In certain applications this has the effect of reducing the louvre free area by 16%.

Insect Mesh

Available as an optional extra in expanded aluminium material with 1.875mm square apertures. In certain applications this can effectively reduce the louvre free area by 32%.

Acoustic Arrangement

Although not shown in this technical data guide, Zefyr can offer acoustic baffles behind the louvre fascia to alleviate noise control problems. For further information please consult the ventilation department.

Blanking Panels

Available as optional extra in aluminium to match louvres are insulated/uninsulated blanking panels, which can be mill finish or coated to a specified material finish.

Operating Controls

A wide range of unobtrusive pneumatic or electrical actuators are available for the double pass operable louvre.

Maintenance

It is essential that the system be tested regularly in accordance with the operating maintenance instructions provided for each installation.

Quality Assurance

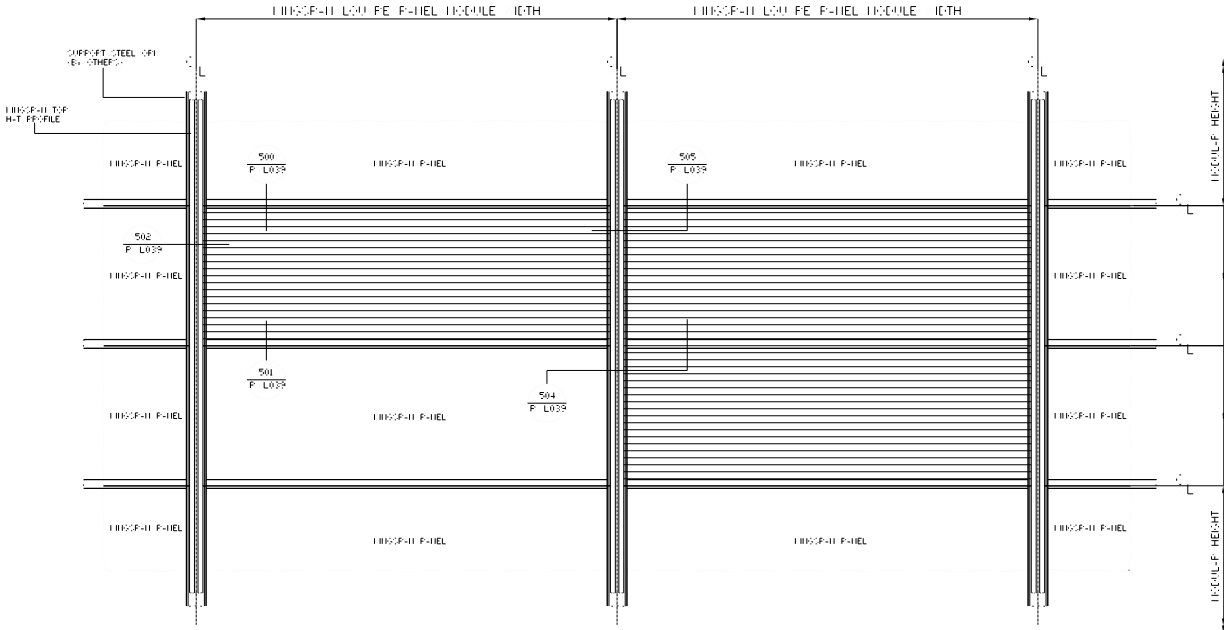
Zefyr operates a quality assurance system in accordance with ISO 9001.

Zefyr Group

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Appendix A – Interface Details

Zefyr Smoothflow – Kingspan Interlocking louvres have the same interface details as per the horizontally laid Kingspan modular wall panels. Details are available in AutoCAD format on CD, by request or downloadable from the “Downloads” section of the Zefyr website – www.zefyrgroup.com.



RVL 039 – 506 – Zefyr SF50-KS70 Panel Elevation



The Smoothflow system has been fully tested for weathering and aerodynamic performance to provide optimum spanning and pressure loss characteristics.

Geometric free area through the blade is 52%. For reductions due to bird mesh, insect mesh and other configurations please call our technical department.

Structural Performance

Based on wind loading of 1.5kN/m² the louvre system will span up to 3.0m between supports laid vertically to the rear of the louvre panel.

Fixing – as per the horizontal Kingspan panel system -

Weights

50mm single pass 15.68 kg/m²
 50mm double pass 21.00 kg/m²

Weather Performance

Independently tested to HEVAC / UK national standards - Wind Speed 13m/s – Rainfall 75mm/hr

50mm single pass - Rain Penetration Classification

Ventilation Rate (m ³ /s)	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Rating	D	D	D	D	D	D	D	D

50mm single pass - Rain Penetration Classification

Ventilation Rate (m ³ /s)	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Rating	A	A	A	B	B	C	C	D

Aerodynamic Performance

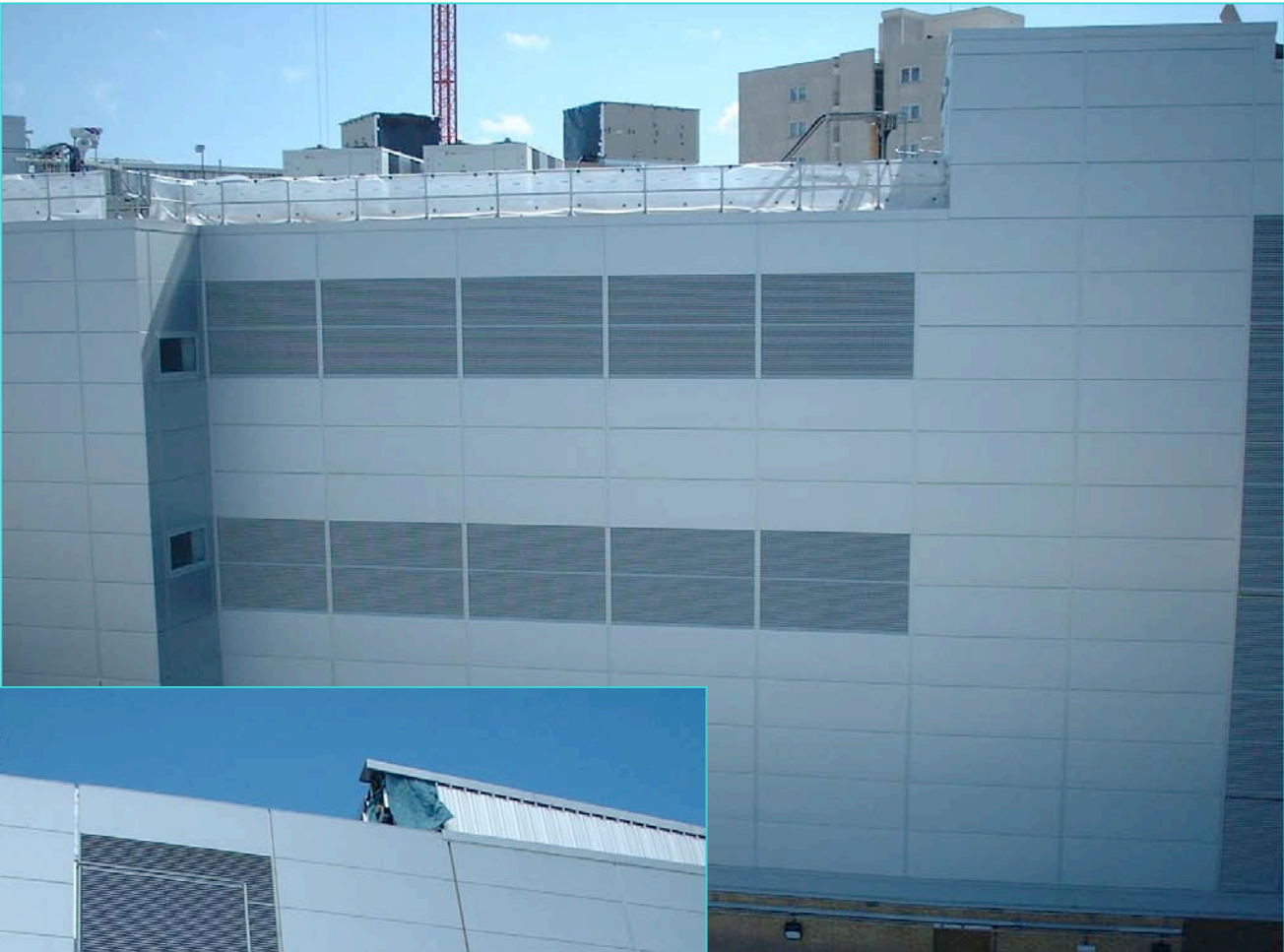
Independently tested to HEVAC / UK national standards

50mm single pass Coefficient of Discharge Cd = 0.299 (with insect mesh / bird guard)

50mm double pass Coefficient of Discharge Cd = 0.197 (with insect mesh / bird guard)

Appendix C – Case Studies

The Smoothflow system has been fully tested for weathering and aerodynamic performance to provide optimum spanning and pressure loss characteristics.









Appendix D – Quotation / Order Forms

For a quotation / orders simply complete the attached forms and post, fax or email to Zefyr .

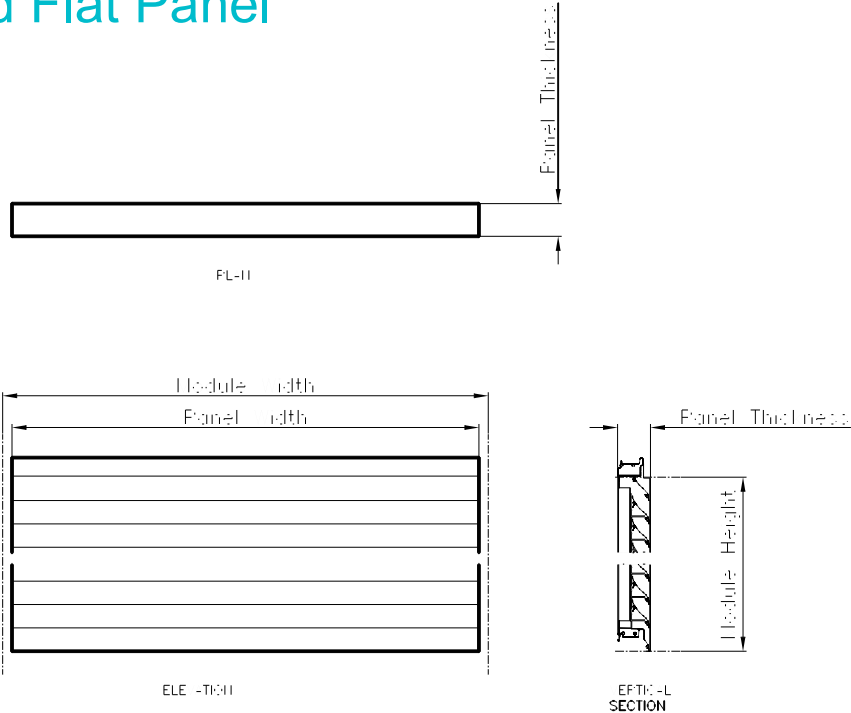
Quotations can also be requested on-line - www.zefyrgroup.com - click on "FAST QUOTE". This would normally be processed and returned within 1 working day.

Zefyr Group

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Zefyr SF50KS – Interlocking Kingspan Louvre System

Standard Flat Panel



(* Delete as required and fax / post to Zefyr. Alternatively email to mail@zefyrgroup.com.)

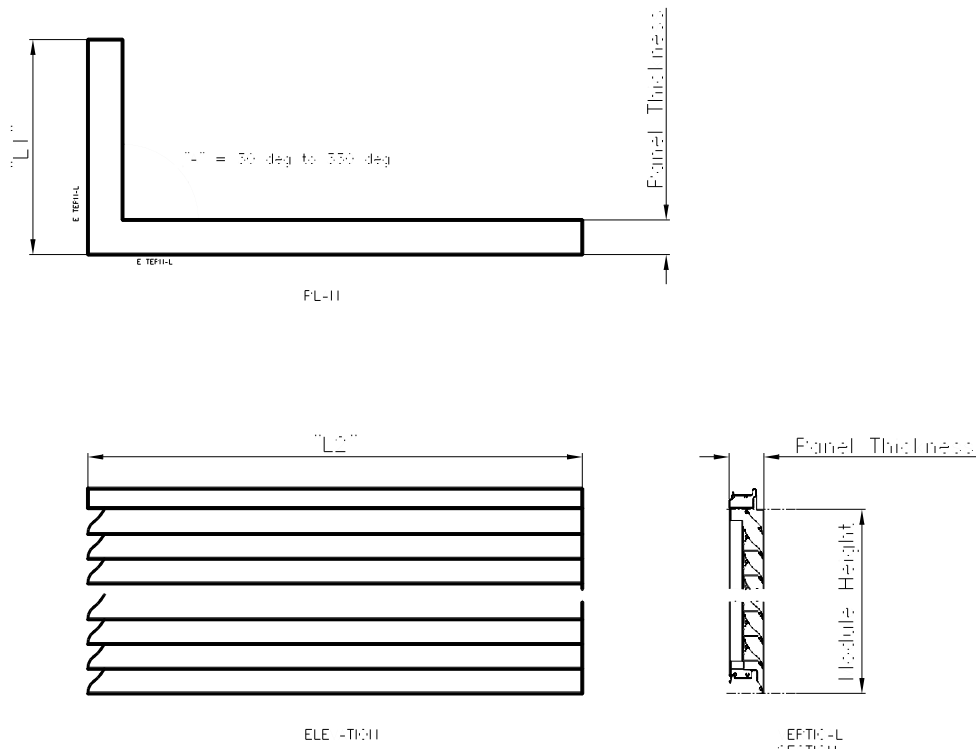
- * Quotation / Order
- * Configuration Single Pass / Double Pass Fixed / Double Pass Operated
- * Operator (Double Pass Operated) Manual Lever / Electric 240vac / Pneumatic
- * Colour: PPC / PVDF Gloss level
- * Infil – None / Insect Mesh / Bird Guard / Blanking panel / Insulated Blanking panel

Item	#Panel Width mm	Module Height mm	Thickness mm	Quantity	Price
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

#NB Panel width NOT module centres

Zefyr SF50KS – Interlocking Kingspan Louvre System

Standard Corner Panel



(* Delete as required and fax / post to Zefyr. Alternatively email to mail@zefyrgroup.com.)

* Quotation / Order

* Configuration Single Pass / Double Pass Fixed / Double Pass Operated

* Operator (Double Pass Operated) Manual Lever / Electric 240vac / Pneumatic

* Colour: PPC / PVDF

Gloss level

* Infil – None / Insect Mesh / Bird Guard / Blanking panel / Insulated Blanking panel

Item	#Panel Width "L1" mm	#Panel Width "L2" mm	Module Height mm	Thickness mm	Quantity	Price
1						
2						
3						
4						
5						
6						
7						
8						
9						

10						
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