



GRILLES | DIFFUSERS | LOUVRES | DAMPERS | SOLAR SHADING | NATURAL VENTILATION

louvres

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## 30mm Weather Louvres

### Description

For intake or extract air, the 45° blades are fixed at 30mm centres and have excellent integral rain defence features. Suitable for external mounting and designed for smaller louver panels.

### Construction

From extruded aluminium sections, frame and blades 1.6mm thick. Hairline mitres mechanically held. Fitted as standard with rear galvanised steel bird mesh screen.

### Size and Weight

From 150 x 150 to 1200 x 1200, concealed rear mullions when width exceeds 900mm.

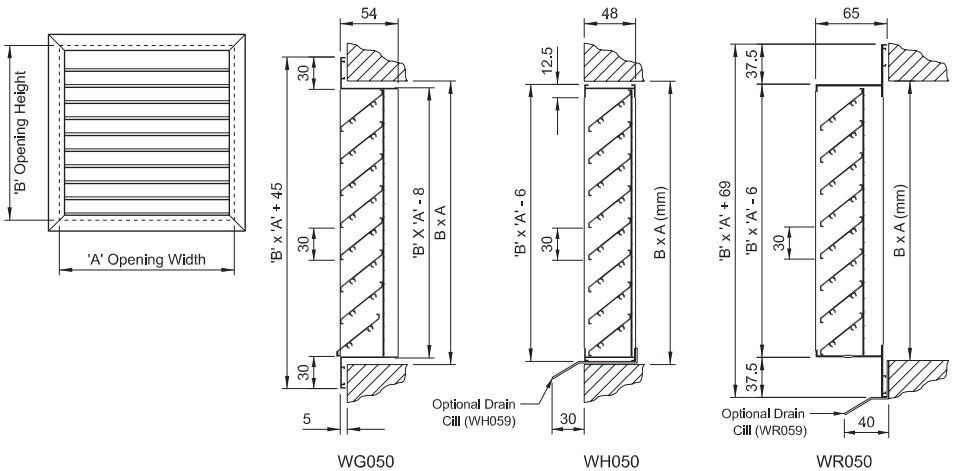
Weight approximately 11.5kg/m<sup>2</sup>.

Free area 50%.

### Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 10 Qty. WG050+0C 500 x 300.



Frame Style	Panel Options	Mesh Options	Accessories
<b>WG</b> 30mm Flange	<b>0</b> Single Panel	<b>5</b> Bird Mesh	<b>0</b> None
<b>WH</b> Recessed Frame		<b>7</b> Insect Mesh	<b>9</b> Drain Cill
<b>WR</b> Reversed Angle Frame		<b>0</b> None	



Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>4</b> Rear Fixing Lugs	<b>A</b> Satin Anodised (WG050 Only)



# 50mm Single Bank Weather Louvres

## Description

For intake or extract air, the 45° blades are fixed at 50mm centres and have excellent integral rain defence features. Heavy duty construction allows large panels to be produced with unbroken blades.

Larger areas can be covered using multiple panel assemblies which will incorporate concealed rear mullions to give continuous blade appearance throughout.

## Construction

From extruded aluminium sections, frame 3.0mm thick, blades 2.0mm thick. All frames to be of fully welded construction. Fitted as standard with rear galvanised steel bird mesh screen.

## Size and Weight

From 600 x 600 to 3000 x 2000 in a single unit. Larger sizes are available in multiple units. Concealed rear mullions when width exceeds 1200mm.  
Average weight: 12.5kg/m<sup>2</sup>.  
Average free area: 48%.

## Rain Defence

The 50mm louvre system has been tested by BSRIA to European standard EN13030:2002 and achieves Class C - (80 - 94.9 % effectiveness).

## Airflow Performance

Tested to EN13030:2002 the following aerodynamic coefficient is achieved : Intake ~ 0.253

## Options

- Matt black rear blanking panels
- Insulated blanking panels (Thermal & Acoustic)
- Mitred corners
- Guards: Insect screen (Fixed or Removable), Security
- Special shapes, Circular, triangular etc.

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT  
e.g. 1 Qty. W5050+0C 2500 x 1500

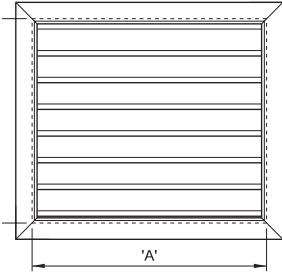


Frame Style	Panel Options	Mesh Options	Accessories
<b>W5</b> Flanged Frame	<b>0</b> Single Panel	<b>5</b> Bird Mesh	<b>0</b> None
<b>W4</b> Recessed Frame	<b>1</b> Multi-Panel Narrow Line Face Mullion	<b>7</b> Insect Mesh	<b>9</b> Drain Cill
<b>W1</b> Reversed Angle Frame	<b>2</b> Multi-Panel Concealed Rear Mullion	<b>0</b> None	



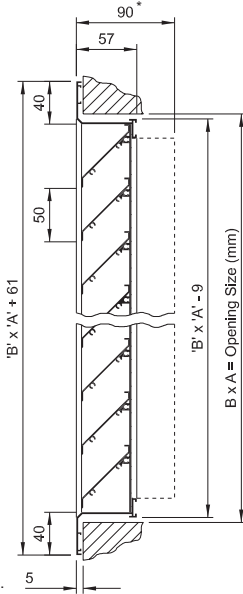
Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>2</b> Rear Fixing Lugs C/W Tee Bolts	<b>J</b> Anolok Anodised

# 50mm Single Bank Weather Louvres

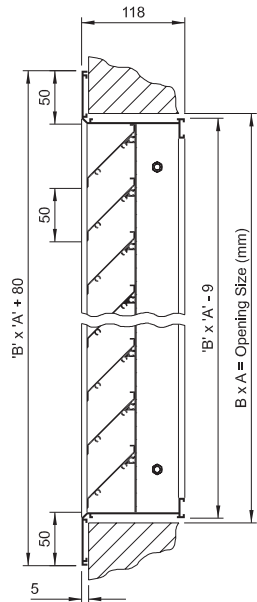


Size is expressed as 'A' x 'B' and relates to the nominal opening size into which the louvre is to be offered. A manufacturing size reduction tolerance is provided. Dimension 'A' (Width) should be stated first followed by dimension 'B' (Height).

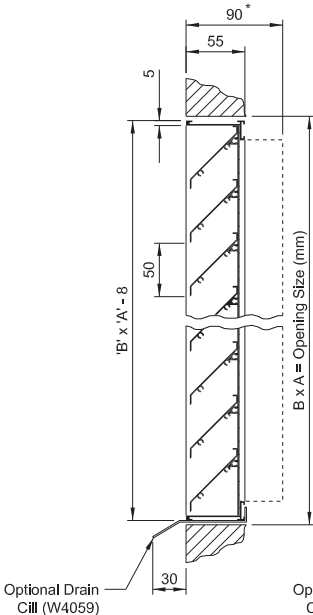
\* For louvres of 1200mm wide and over, heavy duty blade support mullions are incorporated to the rear. Louvre depth increases to dimension (\*).



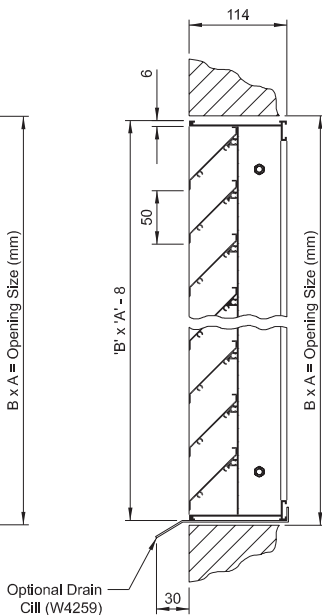
**W5050**  
Flanged Frame



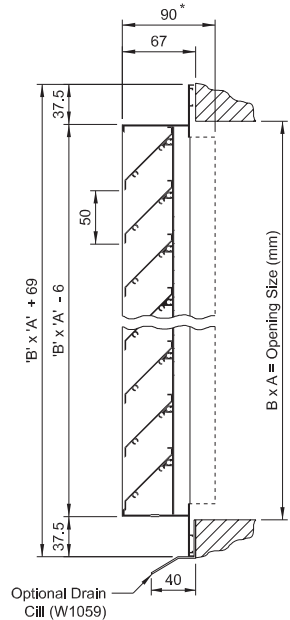
**W5250**  
Flanged Frame:  
Multi-Panel with continuous  
blade appearance



**W4050**  
Recessed Frame



**W4250**  
Recessed Frame:  
Multi-Panel with continuous  
blade appearance



**W1050**  
Reversed Angle Frame

# Technical Data 50mm Single Bank Weather Louvres

- i) Data is based upon louvres fitted with a rear bird guard / debris screen.  
With an insect screen fitted the free area will be reduced by approximately 15%.
- ii) To minimise the risk of rain ingress, intake louvres should be selected against a max face velocity of 1.5M/s.
- iii) Pressure drops are total, given in Pascals, and based on air density of 1.2Kg/M<sup>3</sup>.
- iv) NC ratings shown are given for general guidance only.

## Selection Procedure

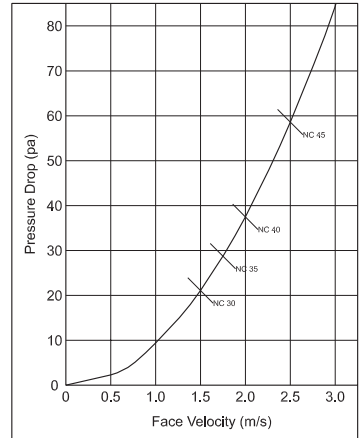
- a) 
$$\frac{\text{Air Volume (M}^3\text{/s)}}{\text{Face Velocity (M/s)}} = \text{Louvre Face Area (M}^2\text{)}$$
- b) Determine the air volume flow rate required to pass through the louvre (M<sup>3</sup>/s).
- c) Determine the maximum acceptable pressure drop (pa).
- d) From the adjacent chart look up face velocity (M/s) against maximum pressure drop.
- e) Divide air volume by face velocity to give required louvre face area.

## Selection Example

- a) Size a W5 (50mm blade pitch) louvre to intake 2.0M<sup>3</sup>/s at 40 Pascals total pressure.
- b) At 40 Pa, a 'Face Velocity' of 2.0M/s is given in the adjacent pressure drop graph; thus apply the formula as follows:

$$\frac{2.0 \text{ Air Volume (M}^3\text{/s)}}{2.0 \text{ Face Velocity (M/s)}} = 1.0\text{M}^2 \text{ Louvre Face Area}$$

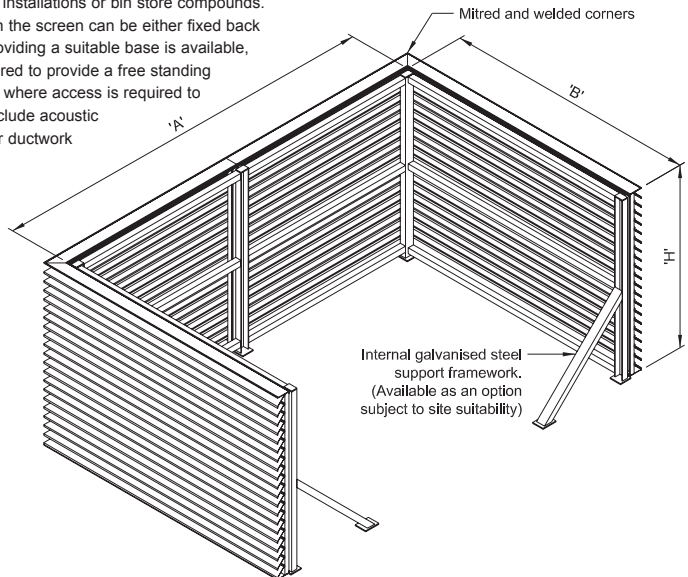
- c) Select a square or rectangular size to give the above face area, e.g. **1100w. x 900h.**



## Louvre Screening

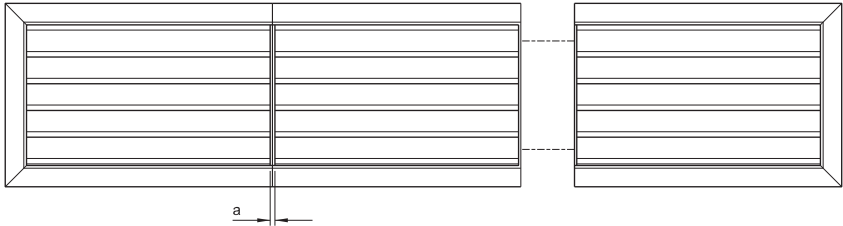
50mm & 75mm louvres can be manufactured to form visual screening enclosures for applications such as roof top plant installations or bin store compounds. Depending on the size and application the screen can be either fixed back to an existing building structure, or providing a suitable base is available, a steel support framework can be offered to provide a free standing enclosure. Doors can be incorporated where access is required to a fully enclosed area. Other options include acoustic blanking, special shapes, openings for ductwork penetrations etc.

Louvre screening is supplied in multiple site assembled panels therefore there are virtually no size or shape constraints. Contact GDL technical sales to discuss specific applications.

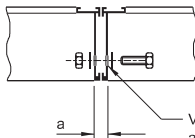


# 50mm & 75mm Weather Louvres Multi-Panel Options

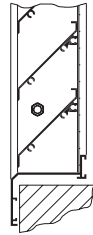
**1** Multi-Panel  
Narrow Line  
Face Mullion



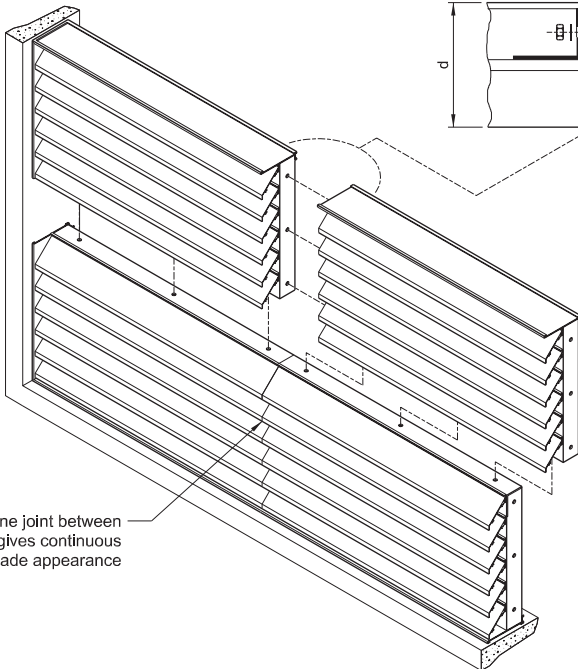
Type	Dim 'a' (mm)
W51	10
W41	10
W11	10
W71	14
W61	14



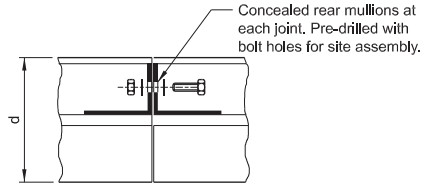
Vertical narrow line mullion at each joint pre-drilled with bolt holes for site assembly



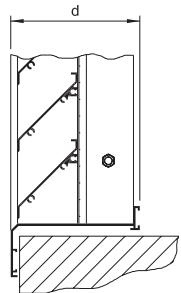
**2** Multi-Panel  
Concealed  
Rear Mullion



Hairline joint between sections gives continuous blade appearance



Concealed rear mullions at each joint. Pre-drilled with bolt holes for site assembly.



Type	Dim 'd' (mm)
W52	118
W42	114
W12	90
W72	118
W62	114

# 50mm Double Bank Weather Louvres

## Description

For intake or extract air, the 45° blades are fixed at 50mm centres and arranged in double bank formation to offer higher levels of rain defence effectiveness.

Heavy duty construction allows large panels to be produced with unbroken blades. Larger areas can be covered using multiple panel assemblies which will incorporate narrowline visible mullions.

## Construction

From extruded aluminium sections, frame 3.0mm thick, blades 2.0mm thick. All frames to be of fully welded construction. Fitted as standard with rear galvanised steel bird mesh screen.

## Size and Weight

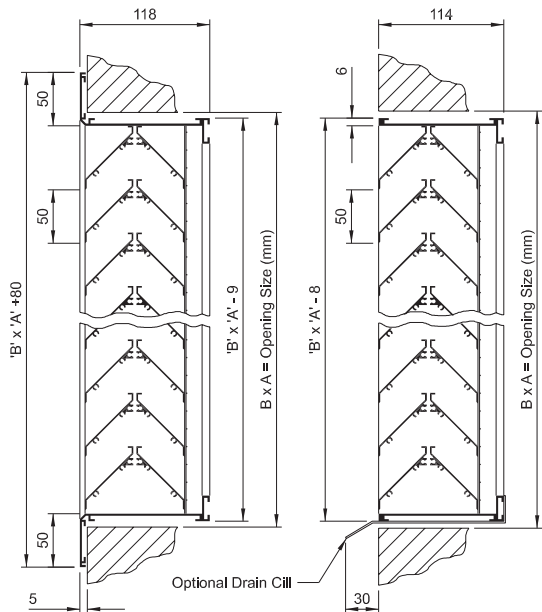
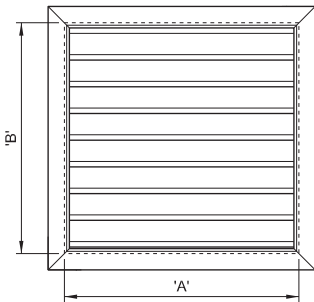
From 600 x 600 to 3000 x 2000 in a single unit. Larger sizes are available in multiple units. Concealed rear mullions when width exceeds 1200mm.

Average weight: 25.0 kg/m<sup>2</sup>.

Average free area: 48%.

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT  
e.g. 1 Qty. 5WA4M+0C 2500 x 1800



5WA4M

5WC4M

Blade Pitch	Frame Style	Options	Mesh Options
5 50mm Blade Pitch	WA Flanged Frame	4 Double Bank Chevron	M Bird Mesh
	WC Recessed Frame		I Insect Mesh
			0 None



Fixings	Finish
0 None	D Mill Finish
1 Flange Holes	C PPC BS / RAL Colour
2 Rear Fixing Lugs C/W Tee Bolts	



# Combined Intake / Discharge Louvres

## Description

This unique louvre offers both air intake and discharge within the same panel.

The warm discharged air is directed upwards at 45° avoiding short cutting and cross contamination of the incoming supply air in the lower louvre section (see detail below).

Heavy duty construction allows large panels to be produced with unbroken blades.

Larger areas can be covered using multiple panel assemblies which will incorporate narrowline visible mullions.

## Construction

From extruded aluminium sections, frame 3.0mm thick, blades 2.0mm thick. All frames to be of fully welded construction. Fitted as standard with rear galvanised steel bird mesh screen.

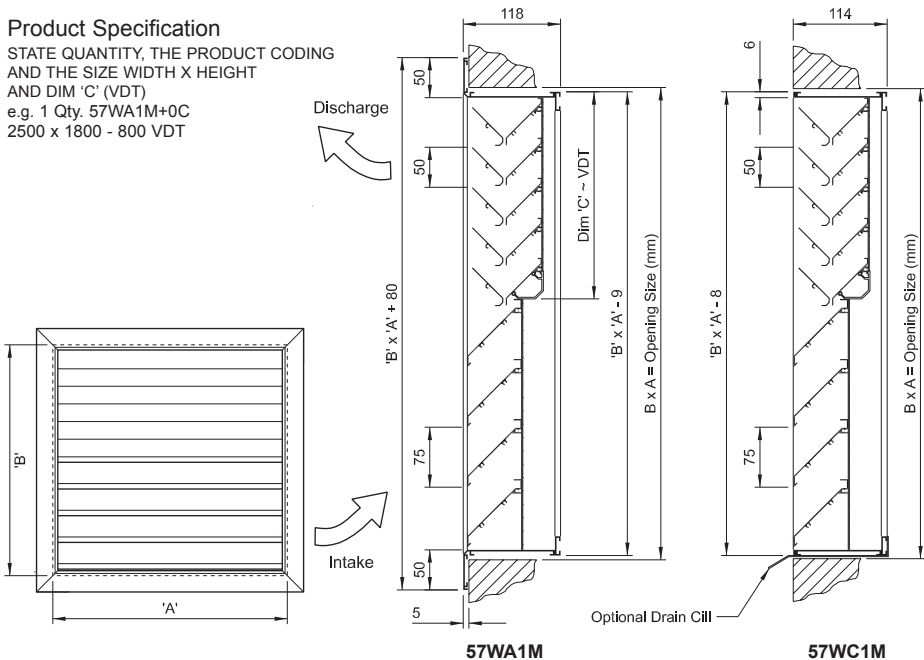
## Size and Weight

From 600 x 600 to 3000 x 2000 in a single unit. Larger sizes are available in multiple units. Concealed rear mullions when width exceeds 1200mm.  
Average weight: 19.75kg/m<sup>2</sup>.  
Average free area: 48%.



## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT AND DIM 'C' (VDT)  
e.g. 1 Qty. 57WA1M+0C  
2500 x 1800 - 800 VDT



Blade Pitch	Frame Style	Options	Mesh Options
<b>57</b> 50 / 75mm	<b>WA</b> Flanged Frame	<b>1</b> None	<b>M</b> Bird Mesh
<b>36</b> 30 / 60mm	<b>WC</b> Recessed Frame		<b>I</b> Insect Mesh
	<b>WB</b> Reversed Angle Frame		<b>0</b> None



Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>2</b> Rear Fixing Lugs C/W Tee Bolts	



# 60mm Weather Louvres

## Description

For intake or extract air, the 45° blades are fixed at 60mm centres and have excellent integral rain defence features. Suitable for external mounting and is economically priced.

## Construction

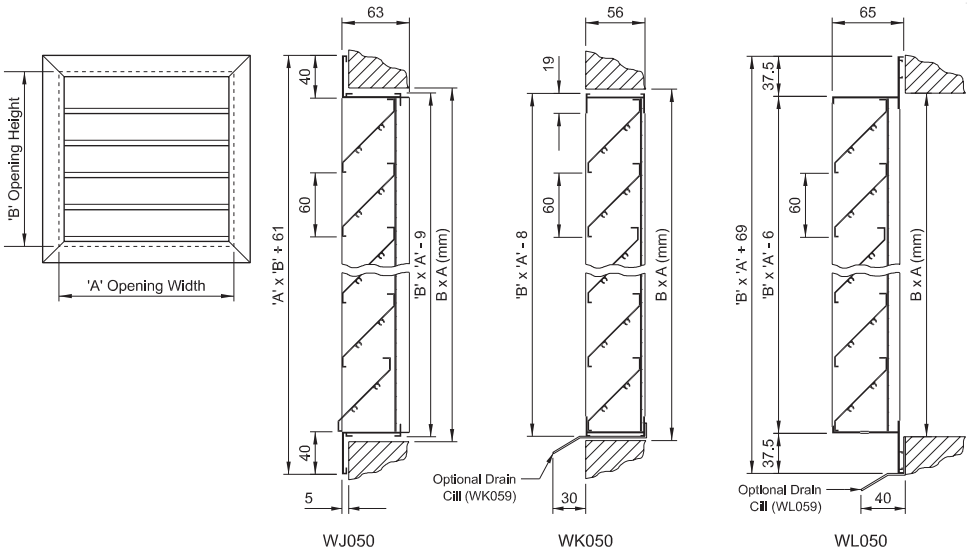
From extruded aluminium sections, frame and blades 1.6mm thick. Hairline mitres mechanically held, fitted as standard with rear galvanised steel bird mesh screen.

## Size and Weight

From 300 x 300 up to 2500 x 1800. Concealed rear mullions when width exceeds 1200mm. Weight approximately 12kg/m<sup>2</sup>. Free area 48%.

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT  
 e.g. 10 Qty. WJ050+0C 1500 x 1000.



Frame Style	Panel Options	Mesh Options	Accessories
<b>WJ</b> 40mm Flange	<b>0</b> Single Panel	<b>5</b> Bird Mesh	<b>0</b> None
<b>WK</b> Recessed Frame		<b>7</b> Insect Mesh	<b>9</b> Drain Cill
<b>WL</b> Reversed Angle Frame		<b>0</b> None	



Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>4</b> Rear Fixing Lugs	

## 75mm Single Bank Weather Louvres

### Description

For intake or extract air, the 45° blades are fixed at 75mm centres and have excellent integral rain defence features. Heavy duty construction allows large panels to be produced with unbroken blades.

Larger areas can be covered using multiple panel assemblies which will incorporate concealed rear mullions to give continuous blade appearance throughout.

### Construction

From extruded aluminium sections, frame 3.0mm thick, blades 2.0mm thick. All frames to be of fully welded construction. Fitted as standard with rear galvanised steel bird mesh screen.

### Size and Weight

From 600 x 600 to 3500 x 3500 in a single unit. Larger sizes are available in multiple units. Concealed rear mullions when width exceeds 1200mm.

Average weight: 12.75kg/m<sup>2</sup>.

Average free area: 48%.

### Rain Defence

The 75mm louvre system has been tested by BSRIA to European standard EN13030:2002 and achieves Class C - (80 - 94.9 % effectiveness).

### Airflow Performance

Tested to EN13030:2002 the following aerodynamic coefficient is achieved : Intake ~ 0.258

### Options

Matt black rear blanking panels

Insulated blanking panels (Thermal & Acoustic)

Mitred corners

Guards: Insect screen (Fixed or Removable), Security

Special shapes, Circular, triangular etc.

### Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE

WIDTH X HEIGHT

e.g. 1 Qty. W7050+0C 3000 x 2000

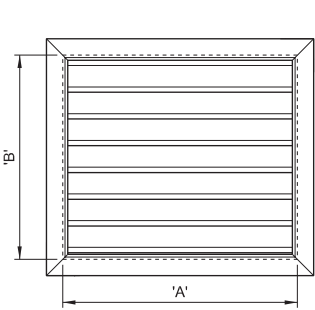


Frame Style	Panel Options	Mesh Options	Accessories
<b>W7</b> 50mm Flange	<b>0</b> Single Panel	<b>5</b> Bird Mesh	<b>0</b> None
<b>W6</b> Recessed Frame	<b>1</b> Multi-Panel Narrow Line Face Mullion	<b>7</b> Insect Mesh	<b>9</b> Drain Cill
<b>W9</b> Frameless Panel	<b>2</b> Multi-Panel Concealed Rear Mullion	<b>0</b> None	



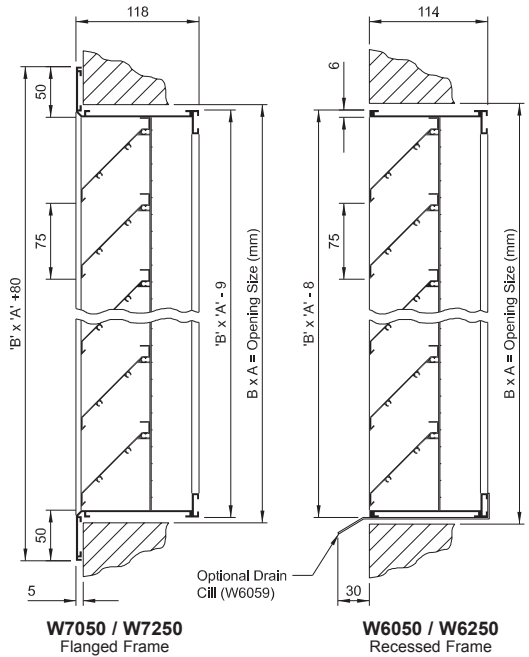
Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>2</b> Rear Fixing Lugs C/W Tee Bolts	<b>J</b> Anodok Anodised

# 75mm Single Bank Weather Louvres



Size is expressed as 'A' x 'B' and relates to the nominal opening size into which the louvre is to be offered. A manufacturing size reduction tolerance is provided. Dimension 'A' (Width) should be stated first followed by dimension 'B' (Height).

Louvre blades are supported at a maximum of 1200mm centres. Multi-Panel louvres and panels exceeding 1200mm, incorporate heavy duty rear mullions and blade support clips to give continuous line appearance from the face. These are accommodated within the frame shown above and do not increase the depth dimension of the louvre.



## Technical Data

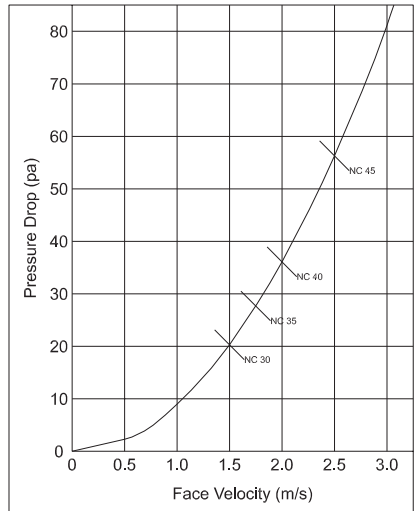
- i) Data is based upon louvres fitted with a rear bird guard / debris screen.  
With an insect screen fitted the free area will be reduced by approximately 15%.
- ii) To minimise the risk of rain ingress, intake louvres should be selected against a max face velocity of 1.5M/s.
- iii) Pressure drops are total, given in Pascals, and based on air density of 1.2Kg/M<sup>3</sup>.
- iv) NC ratings shown are given for general guidance only.

## Selection Procedure

- a)  $\frac{\text{Air Volume (M}^3\text{/s)}}{\text{Face Velocity (M/s)}} = \text{Louvre Face Area (M}^2\text{)}$
- b) Determine the air volume flow rate required to pass through the louvre (M<sup>3</sup>/s).
- c) Determine the maximum acceptable pressure drop (pa).
- d) From the adjacent chart look up face velocity (M/s) against maximum pressure drop.
- e) Divide air volume by face velocity to give required louvre face area.

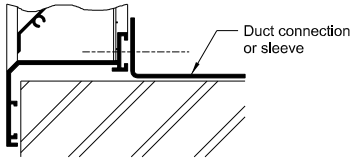
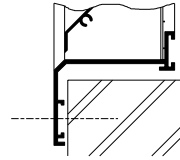
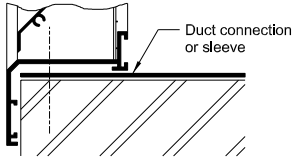
## Selection Example

- a) Size a W7 (75mm blade pitch) louvre to exhaust 5.0M<sup>3</sup>/s at 70 Pascals total pressure.
- b) At 70 Pa, a 'Face Velocity' of 2.75M/s is given in the adjacent pressure drop graph; thus apply the formula as follows:  
 $\frac{5.0 \text{ Air Volume (M}^3\text{/s)}}{2.75 \text{ Face Velocity (M/s)}} = 1.8\text{M}^2 \text{ Louvre Face Area}$
- c) Select a square or rectangular size to give the above face area, e.g. **1800w. x 1000h.**



# Weather Louvre Fixing Options

+ 0 None



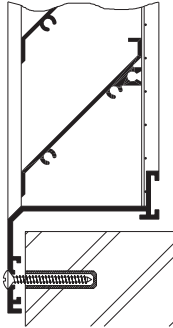
Fixings by installers via positions indicated in situ. From the face of the louvre it is possible to fix between the louvre blades via the side frames.

Use code +0 as the 6th digit of the product coding. Final sealing by installers.

+ 1 Flange Holes

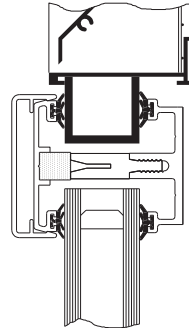
Pre-punched or drilled flange holes to take No.8 self-tapping screws.

Hole position at the discretion of the factory, unless stated otherwise.

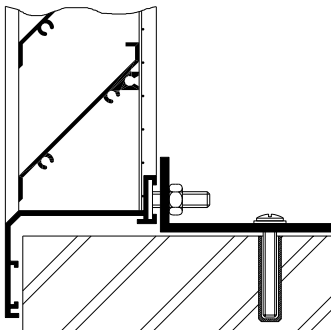


+ G Glazing Bar

25mm or 28mm glazing bar welded around the perimeter of louvre frame. Suitable for double glazing frame applications. Available on louvre types 'W4' and 'W6'. Specify the overall glass size which the louvre is to replace and glass thickness (25mm or 28mm)

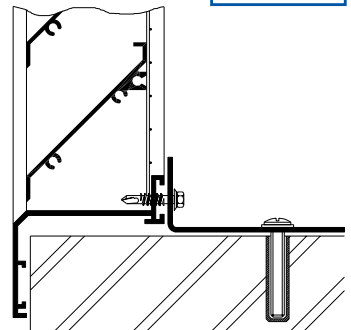


+ 2 Rear Fixing Lugs C/W Tee Bolts



Fixing style '+2' is intended for the larger sized louvre panel with either flanged framing or recess style frame. Specially formed 'Tee bolts' traverse within the track at the rear of frame. Bolts and brackets supplied but quantity at the factory's discretion.

+ 4 Rear Fixing Lugs



Fixing style '+4' is ideal for small to medium sized louvre panels. Brackets are of 1.6mm galvanised sheet steel folded but undrilled. Screws and bolts supplied by others. Brackets should be affixed direct to rear of louvre frame by self-tapping screws. The quantity of brackets is at the factory's discretion (minimum 4 No.)



## Louvre Doors

### Description

For intake or extract air, the louvre doors are available in 50mm pitch or 75mm pitch blades and in single or double leaf. Either with flanged frame or recessed frame, the louvre doors are robustly manufactured with optional threshold details. Door furniture and ironmongery can generally be provided to suit specific needs and generally include optional mortice locks, door stays, panic push bars and handles.

### Construction

From extruded aluminium sections, frame 5.0mm thick, blades 1.6mm thick. All frames are fully welded construction fitted as standard with rear galvanised steel bird mesh screen. Euro profile cylinder mortice lock and stainless steel hinges with ball bearing washers are fitted as standard and plated brass shoot bolts are fitted as standard to one leaf of double doors.

### Size and Weight

Generally to suit individual door openings or can be incorporated within large louvre sections.  
Average weight: 20.0kg/m<sup>2</sup>.  
Average free area: 40%.

### Rain Defence

The 50mm & 75mm louvre systems have been tested by BSRIA to European standard EN13030:2002 and achieve Class C - (80 - 94.9 % effectiveness).

### Airflow Performance

Tested to EN13030:2002 the following aerodynamic coefficient is achieved:  
50mm Intake ~ 0.253.  
75mm Intake ~ 0.258.

### Options

Matt black rear blanking panels  
Insulated blanking panels (Thermal & Acoustic)  
Guards: Insect screen (Fixed or Removable)  
Panic bars, door stays, master keying, keypad locks, door closers, etc.

### Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE  
WIDTH X HEIGHT  
e.g. 1 Qty. D7WC1FM+0C 1800 x 2100



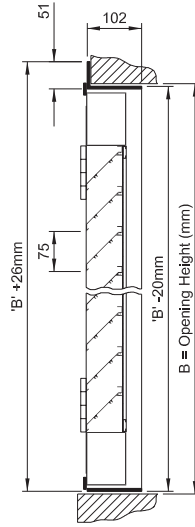
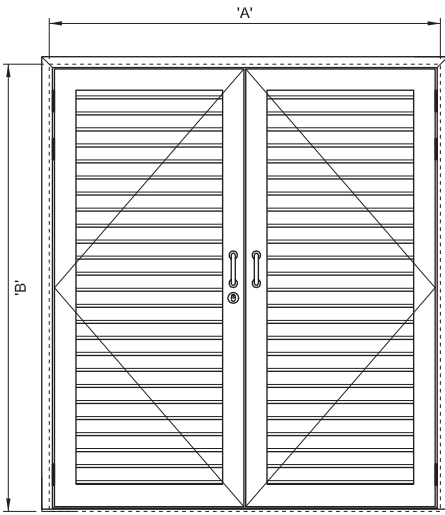
Product Type	Blade Pitch	Frame Style	Threshold	Mesh Options
<b>S</b> Single Leaf Door	<b>7W</b> 75 mm	<b>A1</b> Flanged Frame	<b>F</b> Flat Plate Threshold	<b>M</b> Bird Mesh
<b>D</b> Double Leaf Door	<b>5W</b> 50 mm	<b>C1</b> Recessed Frame	<b>A</b> Flanged Threshold	<b>I</b> Insect Mesh
			<b>C</b> 38 mm Channel	<b>0</b> None
			<b>0</b> None	



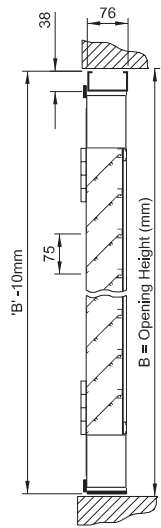
Fixings	Finish
<b>0</b> None	<b>D</b> Mill Finish
<b>1</b> Flange Holes	<b>C</b> PPC BS / RAL Colour
<b>2</b> Rear Fixing Lugs	



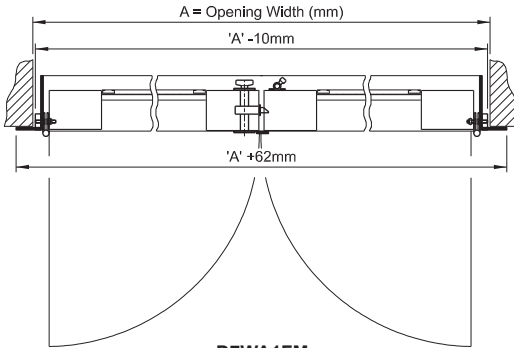
# Double Leaf Louvre Doors



**D7WA1FM**

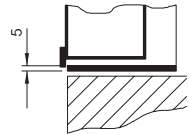


**D7WC1FM**

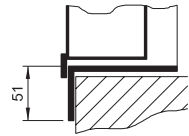


## Threshold Options

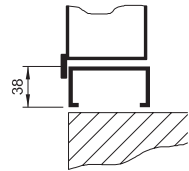
**Threshold 'F'**  
5.0mm thick flat threshold plate can be fitted to either frame style A1 or C1



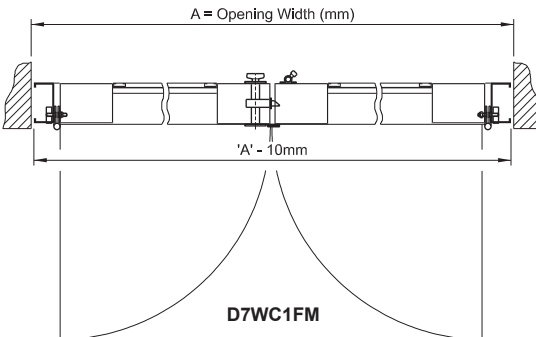
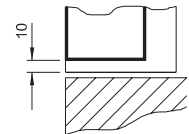
**Threshold 'A'**  
51mm flanged threshold matching frame style A1



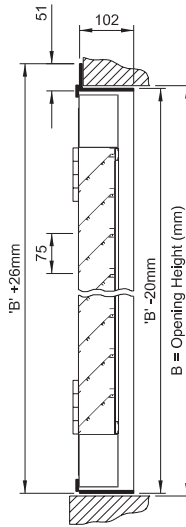
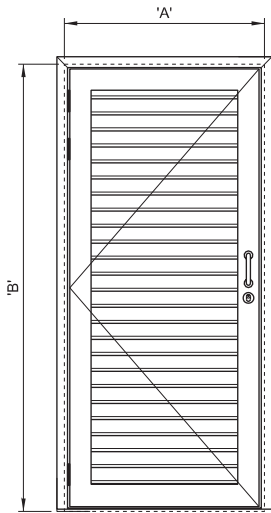
**Threshold 'C'**  
38mm channel threshold can be fitted to either frame style A1 or C1



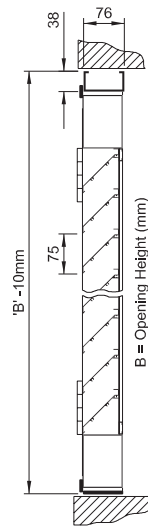
**Threshold 'O'**  
No threshold required. Frame is supplied with removable transit bar



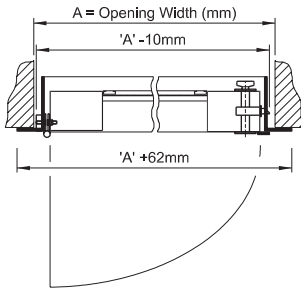
# Single Leaf Louvres Doors



**S7WA1FM**

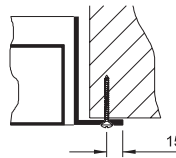


**S7WC1FM**

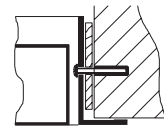


**S7WA1FM**

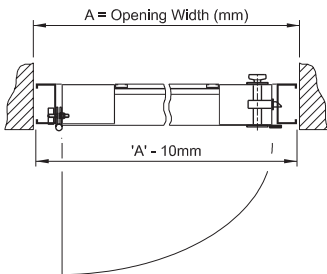
## Recommended Fixing Options



**Frame A1 '+1' Fixings**  
Pre-drilled  $\varnothing 4.5\text{mm}$  countersunk holes in flanges to suit No.8 screws. Hole centers at factories discretion, or to suit specific requirements.



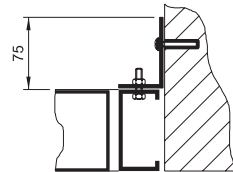
**Frame A1 '+0' Fixings**  
Fixings through frame into surrounding structure by others. Frame should be packed out with suitable shims at fixing points to avoid distortion.



**S7WA1FM**



**Frame C1 '+0' Fixings**  
Fixings through frame into surrounding structure by others. Frame should be packed out with suitable shims at fixing points to avoid distortion.



**Frame C1 '+2' Fixings**  
Fixings via rear angle lugs bolted to rear of frame. Lugs are supplied loose for site fixing. Lugs are complete with slotted holes to suit M6 fixings. Frame drillings and M6 fixings by others.

# Screen Louvre Doors

## Description

Single or Double leaf doors can be incorporated within a louvre system where access is required through the louvred area i.e. Plantrooms, Bin Compounds, Plant Enclosures etc.

## Construction

From extruded aluminium sections, frame 5.0mm thick, blades 1.6mm thick. All frames are fully welded construction fitted as standard with rear galvanised steel bird mesh screen.

## Design / Installation

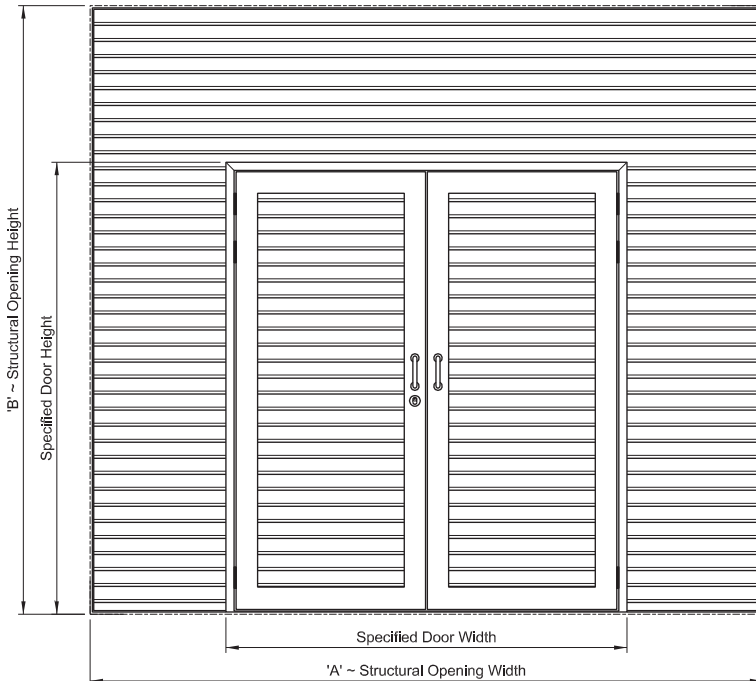
Single or double leaf access doors can be incorporated at any point within a 50mm or 75mm louvre system.

Fixed louvre sections are supplied in panel kit form with the door section supplied as a complete unit.

All necessary bolts and bracketry are supplied for ease of installation.

GDL engineers are available to discuss specific site requirements and also carry out site surveys where required.

CAD manufacturing / installation drawings will be provided for client approval. A qualified installation team is available.



# Turret / Penthouse Louvres

## Description

For supply or extract air, designed to offer weather protection to roof-top openings. Neat welded mitred corners and all welded concealed frame ensure maximum rigidity whilst an attractive appearance is completed with its pitch roof construction.

## Construction

From extruded aluminium sections, frame 3.0mm - 5.0mm thick, with 1.6mm thick Blades. Aluminium roof 1.5mm thick, fully welded construction.

## Size and Weight

There are virtually no size constraints as large units are produced in multiple sections.

Average weight: 60.0kg/m<sup>2</sup>.

Average free area: 50%.

## Options

Extended turned down base angle

Access doors

Matt black rear blanking panels

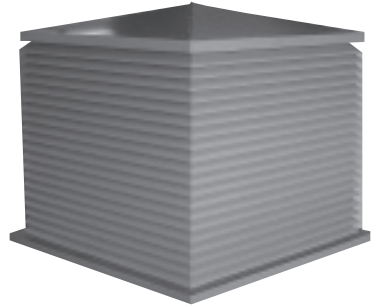
Insulated blanking panels (Thermal & Acoustic)

Guards: Insect screen (Fixed or Removable)

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 1 Qty. 5WTB1M+0C 1800 x 900 x 600 H.



## Rain Defence

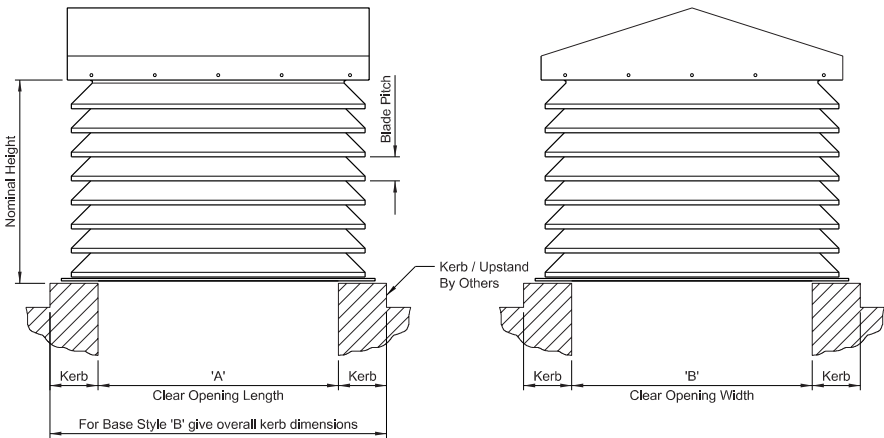
The 50mm & 75mm louvre systems have been tested by BSRIA to European standard EN13030:2002 and achieve Class C (80 - 94.9 % effectiveness). 3WT High Performance Blade Meets Class B.

## Airflow Performance

Tested to EN13030:2002 the following aerodynamic coefficient is achieved :

50mm Intake ~ 0.253.

75mm Intake ~ 0.258.



Blade Pitch	Product Type	Base Style	Options	Mesh Options
5 50 mm Blade Pitch	WT Turret Louvre	A Standard Base	1 None	M Bird Mesh
7 75 mm Blade Pitch		B Extended Turned Down Base Angle		I Insect Mesh
3 High Performance				0 None

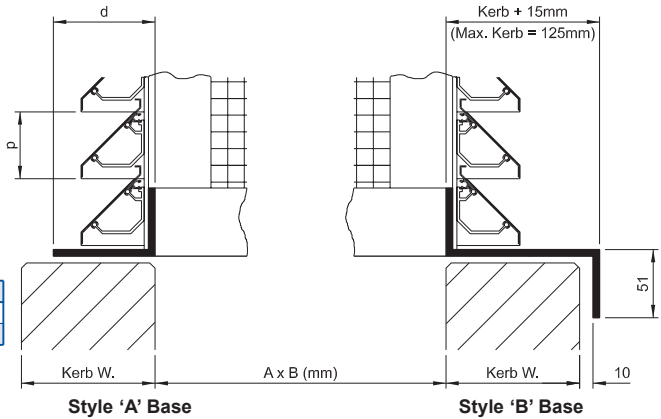


Fixings	Finish
0 None	D Mill Finish
1 Extended Corner Posts	C PPC BS / RAL Colour

# Turret / Penthouse Louvres

## Base Style Options

Type	Dim 'p' (mm)	Dim 'd' (mm)
5WTA	50	76
7WTA	75	102

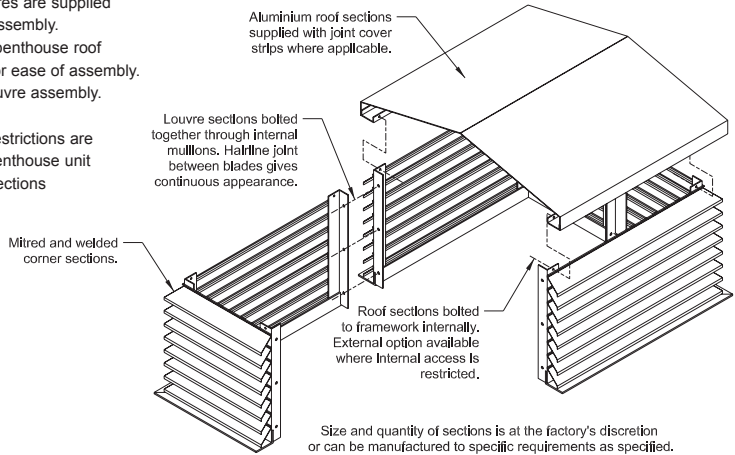


## Multiple Section Units

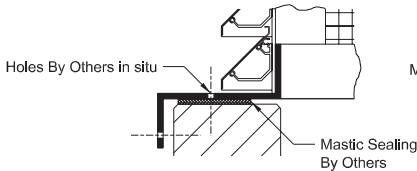
Larger sized penthouse louvres are supplied in multiple sections for site assembly.

All connecting mullions and penthouse roof fixing points are pre-drilled for ease of assembly. Full bolt kit is provided for louvre assembly.

Where transport or access restrictions are a consideration, any sized penthouse unit can be supplied in kit-form sections upon request.

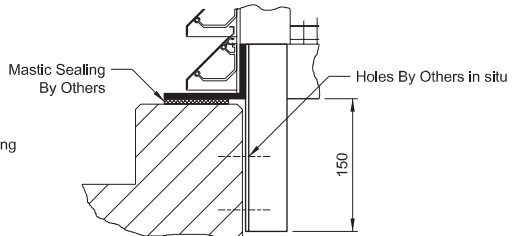


## Recommended Fixing Options



### Code '+0' fixings (Standard)

Fixings through base angle into kerb/upstand.



### Code '+1' fixings

Internal extended corner posts.

Larger units also have intermediate extended posts for additional fixings.

# Technical Data Turret / Penthouse Louvres

- i) Data is based upon louvres fitted with a rear bird guard / debris screen. With an insect screen fitted the free area will be reduced by approximately 15%.
- ii) Low, wide turret louvres perform more efficiently and offer better weather protection than tall narrow units.
- iii) To minimise the risk of rain ingress, intake louvres should be selected against a max face velocity of 1.5M/s.
- iv) Pressure drops are total, given in Pascals, and based on air density of 1.2Kg/M<sup>3</sup>.
- v) NC ratings shown are given for general guidance only.

## Selection Procedure

- a) 
$$\frac{\text{Air Volume (M}^3\text{/s)}}{\text{Face Velocity (M/s)}} \times 1.2 = \text{Nominal Louvre Area (M}^2\text{)}$$
- b) Determine the air volume flow rate required to pass through the louvre (M<sup>3</sup>/s).
- c) Determine the maximum acceptable pressure drop (pa).
- d) From the adjacent chart look up face velocity (M/s) against maximum pressure drop.
- e) Divide air volume by face velocity & multiply x 1.2 to give required nominal louvre area.

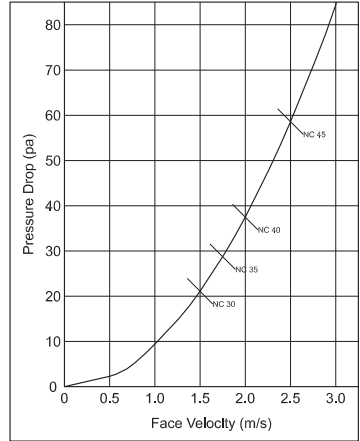
## Selection Example

- a) Size a 5WT1M Turret louvre to intake 6.0M<sup>3</sup>/s at the recommended face velocity of 1.5M/s.
- b) Determine the pressure drop from the adjacent chart. At 1.5M/s a pressure drop of 21pa is given.
- b) Apply the formula as follows:

$$\frac{6.0 \text{ Air Volume (M}^3\text{/s)}}{1.5 \text{ Face Velocity (M/s)}} \times 1.2 = 4.8\text{M}^2 \text{ Nominal Louvre Area}$$

- c) Select a square or rectangular base size and calculate an appropriate height to give the above nominal louvre area; e.g. 1500 x 1500 x 800 H.

A range of sizes is given in the table below for general guidance. In between sizes and larger sized units than shown are also available.



'Nominal Louvre Area' Values in M <sup>2</sup> For Turret Louvres 5WT & 7WT																
Nom. Opening Size A x B (mm)	Height Dimensions (mm)															
	300	400	450	500	600	700	800	900	1000	1100	1200	1300	1400	1500		
300 x 300	0.36	0.48														
400 x 400	0.48	0.64														
500 x 500	0.6	0.8	0.9	1.0	1.2											
600 x 300	0.54	0.72	0.81	0.9	1.08											
600 x 450	0.63	0.84	0.95	1.05	1.26											
600 x 600	0.72	0.96	1.08	1.2	1.44											
700 x 400	0.66	0.88	0.99	1.1	1.32											
700 x 500	0.72	0.96	1.08	1.2	1.44											
700 x 700	0.84	1.12	1.26	1.4	1.68	1.96										
750 x 750		1.2	1.35	1.5	1.8	2.1	2.25									
800 x 400		0.96	1.08	1.2	1.44	-	-									
800 x 600		1.12	1.26	1.4	1.68	1.96	-									
800 x 800		1.28	1.44	1.6	1.92	2.24	2.4	2.56								
900 x 450			1.22	1.35	1.62	-	-									
900 x 600			1.35	1.5	1.8	2.1	2.25	-								
900 x 900			1.62	1.8	2.16	2.52	2.7	2.88	3.24							
1000 x 500			1.35	1.5	1.8	2.1	2.25	-								
1000 x 750				1.75	2.1	2.45	2.63	2.8	3.15	3.5						
1000 x 1000				2.0	2.4	2.8	3.0	3.2	3.6	4.0						
1100 x 1100				2.2	2.64	3.08	3.3	3.52	3.96	4.4	4.84					
1200 x 600				1.8	2.16	2.52	2.7	2.88	3.24	-	-					
1200 x 900				2.1	2.52	2.94	3.15	3.36	3.78	-	-					
1200 x 1200				2.4	2.88	3.36	3.6	3.84	4.32	4.8	5.28	5.76				
1500 x 750				2.25	2.7	3.15	3.38	3.6	4.05	4.5	-	-				
1500 x 1000				2.5	3.0	3.5	3.75	4.0	4.5	5.0	5.5	6.0				
1500 x 1250				2.75	3.3	3.85	4.13	4.4	4.95	5.5	6.05	6.6				
1500 x 1500				3.0	3.6	4.2	4.5	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0	
1800 x 900				2.7	3.24	3.78	4.05	4.32	4.86	5.4	5.94	6.48	-	-	-	
1800 x 1200				3.0	3.6	4.2	4.5	4.8	5.4	6.0	6.6	7.2	-	-	-	
1800 x 1800					4.32	5.04	5.4	5.76	6.48	7.2	7.92	8.64	9.36	10.08	10.8	
2000 x 1000					3.6	4.2	4.5	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0	
2000 x 1500							5.25	5.6	6.3	7.0	7.7	8.4	9.1	9.8	10.5	
2000 x 2000								6.0	6.4	7.2	8.0	8.8	9.6	10.4	11.2	12.0

Unless specified otherwise, unit sizes shown in the shaded areas above and larger sizes will be manufactured in multiple sections for site assembly.



# Site Assembly Clip-On Louvres

## Description

For intake or extract air, the 45° blades are fixed at optional 75mm and 100mm centres and have excellent integral rain defence features. The louvre blade is snapped into position via the sprung blade clip fitted onto the rear mullions giving an attractive, continuous appearance. Excellent for large louvred areas.

## Construction

From extruded aluminium sections, mullions 3.0mm thick, flashing sections 2.0mm thick, blades 2.0mm thick. Louvres can be supplied in kit format for site assembly or in manufactured panels to suit irregular shapes.

## Size and Weight

From 600 x 600 to see technical sales office.  
 Average weight: 75mm louvre 12.75kg/m<sup>2</sup>, 100mm louvre 16.5kg/m<sup>2</sup>.  
 Average free area: 48%.

## Rain Defence

The 75mm louvre system has been tested by BSRIA to European standard EN13030:2002 and achieves Class C - (80 - 94.9 % effectiveness).

## Options

- Matt black rear blanking panels
- Insulated blanking panels (Thermal & Acoustic)
- Mitred corners
- Guards: Insect screen (Fixed or Removable), Security
- Special shapes, Circular, triangular etc.

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT  
 e.g. 1 Qty. 1WS59+2C 15000 x 3000



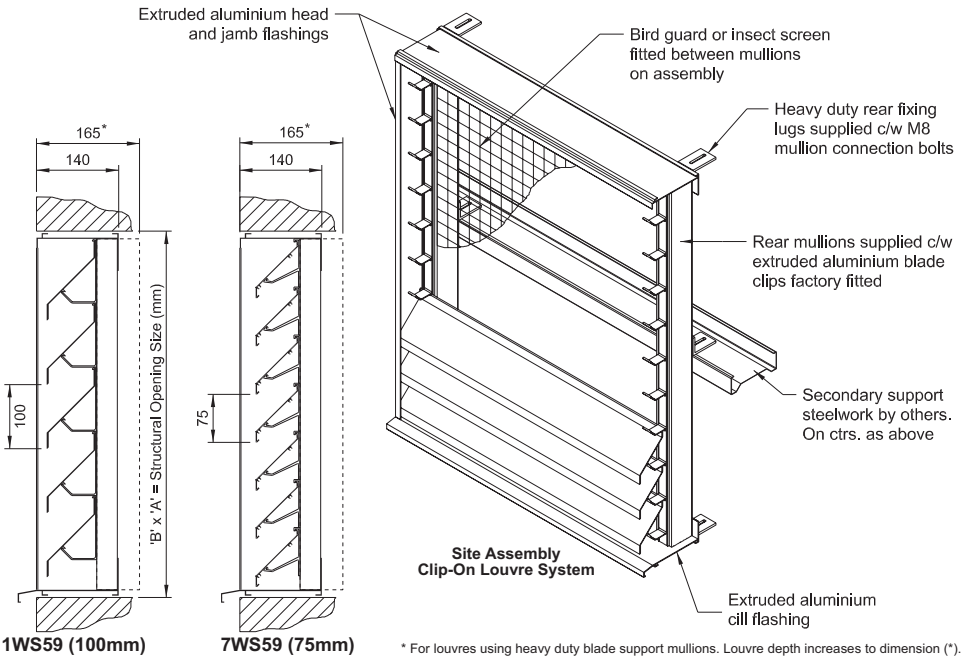
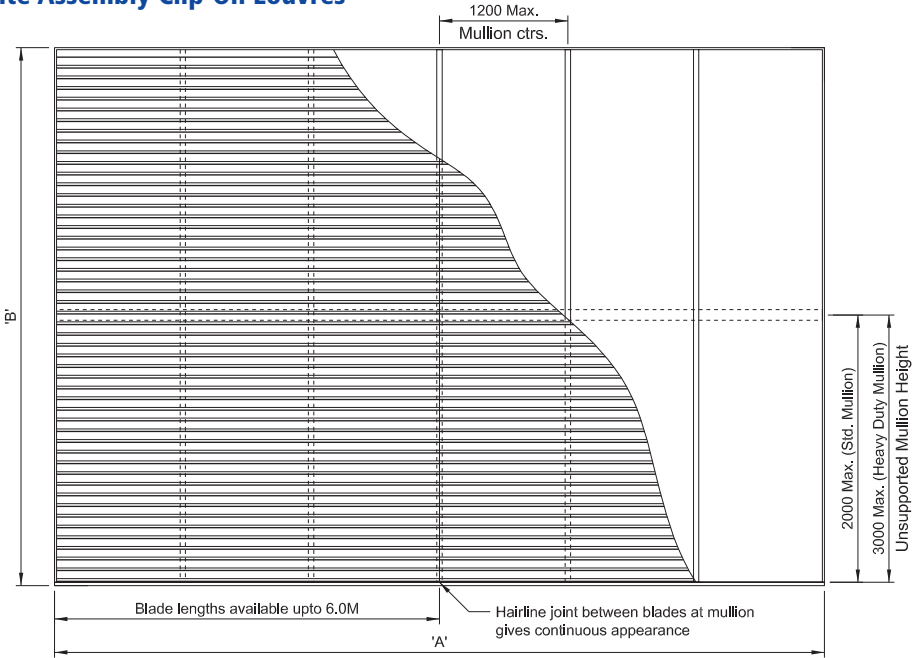
Blade Pitch	Product Type	Mesh Options	Accessories
1 100mm Blade Pitch	WS Site Assembly Louvre	5 Bird Mesh	9 Head, Jamb & Cill Flashing
7 75mm Blade Pitch		7 Insect Mesh	0 None
		0 None	



Fixings	Finish
2 Heavy Duty Rear Brackets	D Mill Finish
0 None	C PPC BS / RAL Colour
	J Anolok Anodised



# Site Assembly Clip-On Louvres



\* For louvres using heavy duty blade support mullions. Louvre depth increases to dimension (\*).

# Acoustic Weather Louvres

## Description

For supply or extract air, the Acoustic Louvre is designed to attenuate medium and high frequency noise breakout from ductwork and plantroom openings. Available in single bank or, for higher levels of attenuation, double bank.

## Construction

Cases and blades formed from aluminium sheet. The attenuation material is glass wool faced with perforated sheet.

## Size and Weight

From 500 x 500 to 1200 x 2000 in a single panel, large units are available in multiple units which bolt together in situ.

Single bank 39kg/m<sup>2</sup>

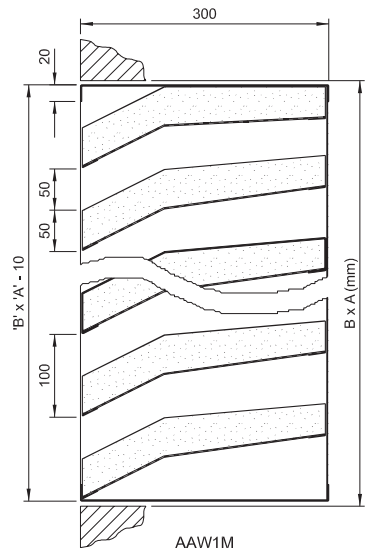
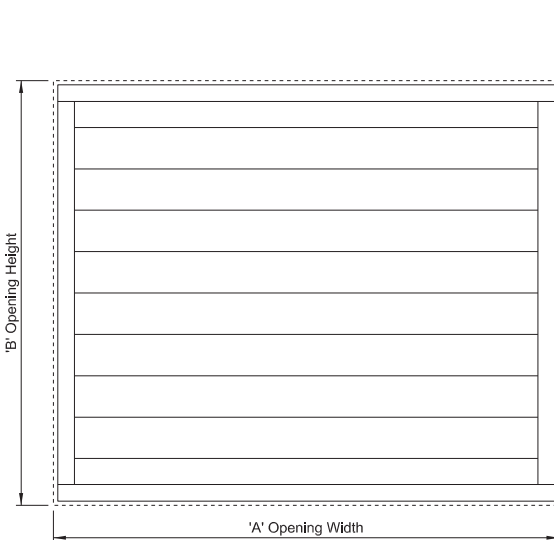
Double bank 79kg/m<sup>2</sup>

Free area approximately 40%

## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 10 Qty. AAW1M+1D 1000 x 800.



Product Type	Construction	Options	Mesh Options
<b>A</b> Acoustic Louvre	<b>AW</b> Aluminium	<b>1</b> Single Bank	<b>M</b> Bird Mesh
		<b>2</b> Double Bank	<b>I</b> Insect Mesh
			<b>0</b> None



Fixings	Finish
<b>0</b> Fixings Through Side Casing	<b>D</b> Mill Finish
<b>1</b> Single Fixing Flange	<b>C</b> PPC BS / RAL Colour
<b>2</b> Double Fixing Flange	

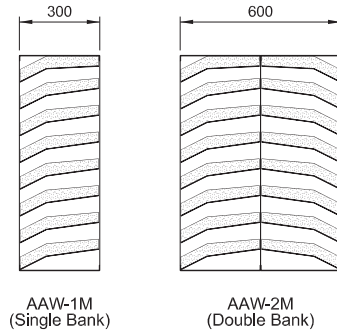
# Technical Data Acoustic Louvres

Table .1.

Acoustic Louvre - Static Insertion Loss (dB)								
Octave Band Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Single Louvre Bank (Standard)	6	7	12	13	14	13	13	11
Double Louvre Bank (Optional)	8	10	18	19	21	20	18	16

Table .2.

Face Velocity And Pressure Drop		
M/s Face Velocity	Pascals Single Bank	Pascals Double Bank
0.50	2	2
0.75	4	4
1.00	6	7
1.25	9	10
1.50	14	15
1.75	17	19
2.00	23	25
2.25	29	31
2.50	35	39
2.75	43	47
3.00	50	56

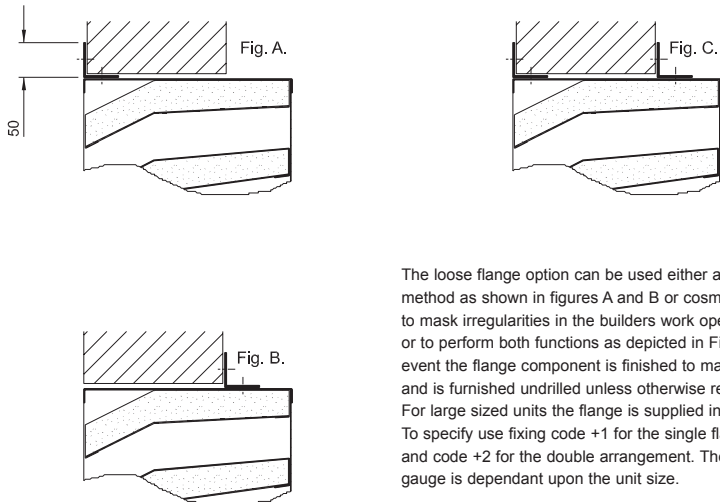


**Selection:**

Recommended Face Velocity is 1.5 - 2.0 M/s

Air Volume / Face Velocity = M<sup>2</sup> Area of Acoustic Louvre

## Acoustic Louvres Fixing Options



The loose flange option can be used either as a fixing method as shown in figures A and B or cosmetically to mask irregularities in the builders work opening, or to perform both functions as depicted in Fig.C. In either event the flange component is finished to match the unit and is furnished undrilled unless otherwise requested. For large sized units the flange is supplied in sections. To specify use fixing code +1 for the single flange option and code +2 for the double arrangement. The flange gauge is dependant upon the unit size.

# Moveable Blade Louvres

## Description

For intake or extract air, the moveable blades, when fully open, are in the conventional 45° position and offer the same excellent weather protection as our standard louvres. The blades can be positioned anywhere between open and fully closed to suit client requirements. Operation is through optional manual or motorised controllers.

## Construction

From extruded aluminium sections, frame 3.0mm thick, blades 2.0mm thick. All frames to be of fully welded construction. Plated fittings and nylon bearings as standard.

## Size and Weight

From 300 x 300 to 1200 x 2000 in a single unit. Visible face mullions are incorporated when width exceeds 1200mm to a maximum width of 2500mm. Larger sizes are available in multiple units. Weight is approximately 22.5kg/m<sup>2</sup>.

Free area is 46% when fully open.

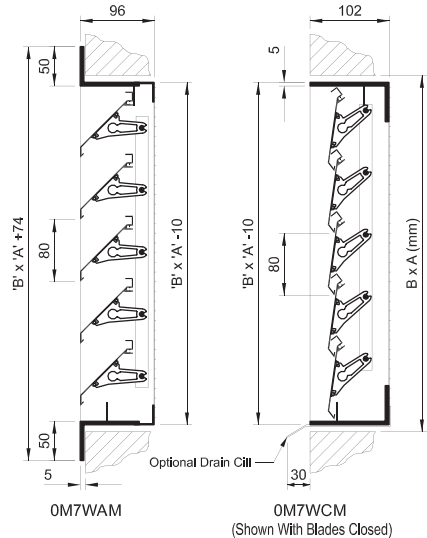
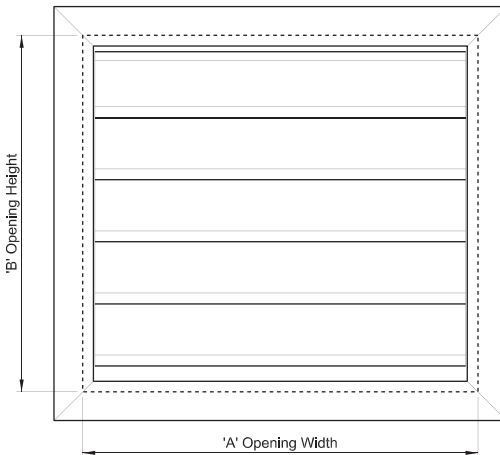
## Product Specification

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 10 Qty. 5M7W-AM+2C 1200 X 500.

## Rain Defence

The moveable blade louvre system achieves class D (less than 80% effectiveness) and therefore should only be considered for areas where water ingress can be contained and removed or is not important.



Blade Actuation	Product Type	Frame Options	Mesh Options
0 > 5 (See Table)	M7 Movable Blade Louvre	WA 50mm Flange	M Bird Mesh
		WC Recess Mounted	I Insect Mesh
			0 None



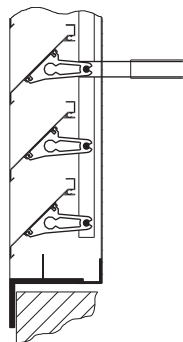
Fixings	Finish
0 None	D Mill Finish
1 Flange Holes	C PPC BS /RAL Colour
2 Rear Fixing Lugs	

## Moveable Blade Louvres Actuation Options

0 M7W	Rear linkage only
1 M7W	Simple rear lever device
2 M7W	Window pole type operation
3 M7W	Rear hand locking quadrant
4 M7W	Remote cable actuation
5 M7W	Electric motor operation

### Code .1. Hand Operation

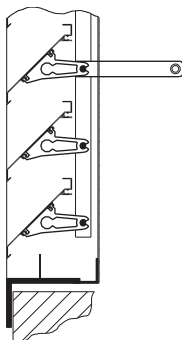
Simple rear hand lever furnished as standard. To specify use code '1' as the first digit of product code.



1M7W

### Code .2. Pole Operation

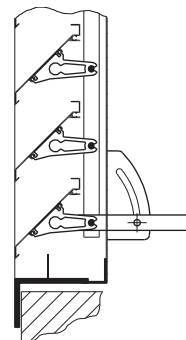
Optional rear lever for window pole type operation. To specify use code '2' as the first digit of product code.



2M7W

### Code .3. Locking Quadrant

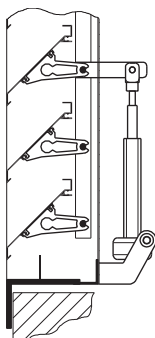
Hand locking rear quadrant device. The required blade position can be selected and locked via a wing-nut. To specify use code '3' as the first digit of product code.



3M7W

### Code .4. 'Teleflex' Operation

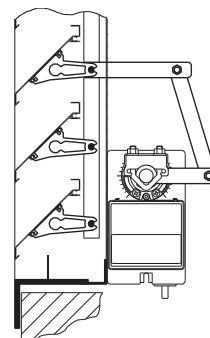
Remote winder and cable operation giving smooth and positive control from open through to closed. To specify use code '4' as the first digit of product code.



4M7W

### Code .5. Electric Motor

Electric motor operation (Belimo or similar) factory fitted. On / Off, modulating or Spring-Return. To specify use code '5' as the first digit of product code and state operating mode & voltage.



5M7W

# Steel Security Bar Grille

## Description

For protection of ventilation or window openings having horizontal and vertical steel bars to prevent entry of personnel. Suitable for wall, window or duct mounting.

## Construction

From 40 x 40mm steel angle frame with 12 x 12mm steel bars at 100mm horizontal centres. All of fully welded construction.

## Size and Weight

From 200 x 200 in 50mm increments. Weight of grille approx 18kg/m<sup>2</sup>. Free area Z1R50 70% Free area Z1S50 85%.

## How to Specify

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 10 Qty. Z1S50+2C 600 x 600.



Frame Style	Options	Options	Accessories
<b>Z1</b> 40 x 40 Steel Angle	<b>R</b> Recess Mounting	<b>5</b> 12 x 12 Steel Security Bars	<b>0</b> None
	<b>S</b> Surface Flange Mounting		

Fixings	Finish
<b>2</b> Neck Fixings	<b>C</b> PPC BS / RAL Colour
<b>1</b> Flange Holes	

