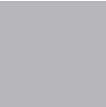




Louver

Specialty & Performance



Contents

Introduction	1
System Features	2
Technical Standards	4
DB - Standard Series	6
SB - Standard Series	10
SB - Lite Series	14
Terminology	18

Introduction

Louver systems have become a consistent feature of modern building design. Their flexibility of use and practical aesthetic has led to their adoption in many commercial, residential and industrial buildings. They can be general systems, or systems optimised specifically for ventilation, rain defence, to control light entry and to screen against other environmental elements. They may also be employed solely for their aesthetic value. **Australia Building Components (ABC) louvers** has highly performance specialty louver which shall be suitable for every intended use.

Choosing the right louver is a matter of identifying the specifics of its purpose. A well-balanced design between both rain defences and ventilation is the key to achieving the best performance. A good louver system is enduring and aesthetically pleasing.

Our experience has enabled us to pursue all three categories of rain defences, ventilation and appearance in tandem. Completing projects with many conventional uses of louvers and satisfying architects and building designers has also proofed our expertise beyond the range of systems presented in this catalogue. Where a new use for louvers system can be identified, **Australia Building Components'** team can design or modify an existing system for the best installation result.

To make architect's dream come true, **Australia Building Components** also offer design and manufacture service apart from the existing wide range of standardised louver models. Our capability in providing customised louver solution starts from structure design, calculations, testing to sample making.

As a pioneer in the industry, our team has applied the **Building Information Modelling (BIM)** and **Design for Manufacture and Assembly (DFMA)** in our latest projects, ensuring the efficiency, safety and accuracy to satisfy our clients' requirement.

Through our operational history, our design and engineering team have gained positive recognitions amongst developers, consultants and main-contractors.

System Features

■ **Aesthetic Value:**

Where the outward appearance of the louver system is independent of its interior features, the visual design of ABC louvers is consistent with most modern buildings.

■ **Extended Durability:**

All louvers in the range have been designed to favour endurance and weather resistance.

■ **Maintenance Friendly:**

Louvers require comparatively less maintenance. The optional Polyvinylidene Difluoride (PVF2) coating finish resists scratches and corrosion.

■ **Informed Choices:**

Each additional feature and fixing of the louver is given a clear and concise reason for its inclusion.

■ **EN Certified:**

All **Australia Building Components** louver models are certified with EN 13030 weather performance test, fulfilling most clients' requirements.

■ **Customisable:**

Louvers can be aluminium or stainless steel, extruded or roll-formed, PVF2 or anodized. Fixings and frames can be added or removed to suit the look of the surrounding façade.

■ **Technical Expertise:**

Australia Building Components team offers best advice on which performance louvers are the most suitable for a given use.

■ **Certified to Standard:**

All louvers comply with testing standard BS EN13030, the European Standard for louvers applicable in the UK and in Hong Kong.

■ **A Range of Accessories:**

Louvers can include bird and insect meshes, blanking panels, dust protection or custom fixings.

ABC BLADE DESIGNS

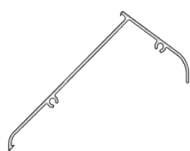
Each ABC Louver blade came into being as a tailor-made design for a specific project. The most successful of these designs are featured in this catalogue.

Flexible Louvers:

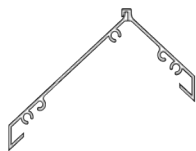
The Single Bank SB Lite and SB Lite Extended blades are designed for adaptability.

Performance Louvers:

The Single Bank SB Standard blade is designed for excellent ventilation and improved rain defense over the SB Lite. The Double Bank Uniblade and the Double Bank Jointed Blade are designed for greatly improved rain defense.



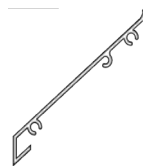
D - B
Uni - body



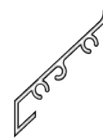
D - B
Joint Blade



S - B
Standard



S- B - Lite
Extended



S - B
Lite

Technical Standards

INTRODUCTION

An ideal louvre system providing perfect rain defense and perfect aerodynamic performance of is yet to exist. All louvres are designed to compromise between the two extremes. However with innovation in designs louver systems have steadily improved on both rain defense and aerodynamic performance in tandem.

In order to quantify the performance of louver systems and provide guidance to building designers, HEVAC and BSRIA developed a test and classification standard that allows for an understanding of the performance of a louver system at a glance.

BS EN 13030 Standard

The British and European standard that tests for rain defense and aerodynamics using pressure drop performance and water penetration at specific air flow rates. This standard has been widely adopted in the global industry and features in government building codes across Europe.

The standard constructs a test environment that simulates weather conditions appropriate for subtropical climates in non-monsoonal regions. The two performance classifications are assigned to each tested system.

Performance Checklist

The following aspects of the installation will affect overall performance and the choice of louver.

- Local Geography and Weather Conditions.
- Site Placement and Fixing Availability
- Aesthetic Value and Orientation
- Airflow rate and Heat Ventilation
- Required maximum pressure drop
- Water Entrainment and Rain Defense
- Wind Load and Structural Load
- Special Uses and Conditions

BS EN 13030 Test Results			
Rain Defence Classification	Effectiveness	Rain Defence Effectiveness (%)	Actual Rain Entry (litres/hr/m ² louver)
Class A	1.00	100%	0.00
	0.99	99%	0.75
Class B	0.989	98%	1.50
	0.95	95%	3.75
Class C	0.949	90%	7.50
	0.80	80%	15.5
Class D	below 0.80	70%	22.5
		60%	30.0
		50%	37.5

Aerodynamic Performance	
Class	Coefficient
Class 1	0.40 and above
Class 2	0.30 to 0.399
Class 3	0.20 to 0.299
Class 4	below 0.20

2

A 1m x 1m sample louver is subjected to simulated intake velocities ranging from 0 to 3.5m/s and 75mm/h of rainfall. The results are classified with a letter and a number, representing the rain and wind performances according to the Test Result table.

Some equivalent standards include AMCA 500-L and AS/NZS 4740

It must be noted that the BS EN13030 standard classifications can be too general in some cases. Designers should consult with the Manufacturer about using the right system.

RECOMMENDATIONS

The following lists the suitable choices for ABC louver systems according to typical selection criteria, representing the design inlet face velocities and rainfall.

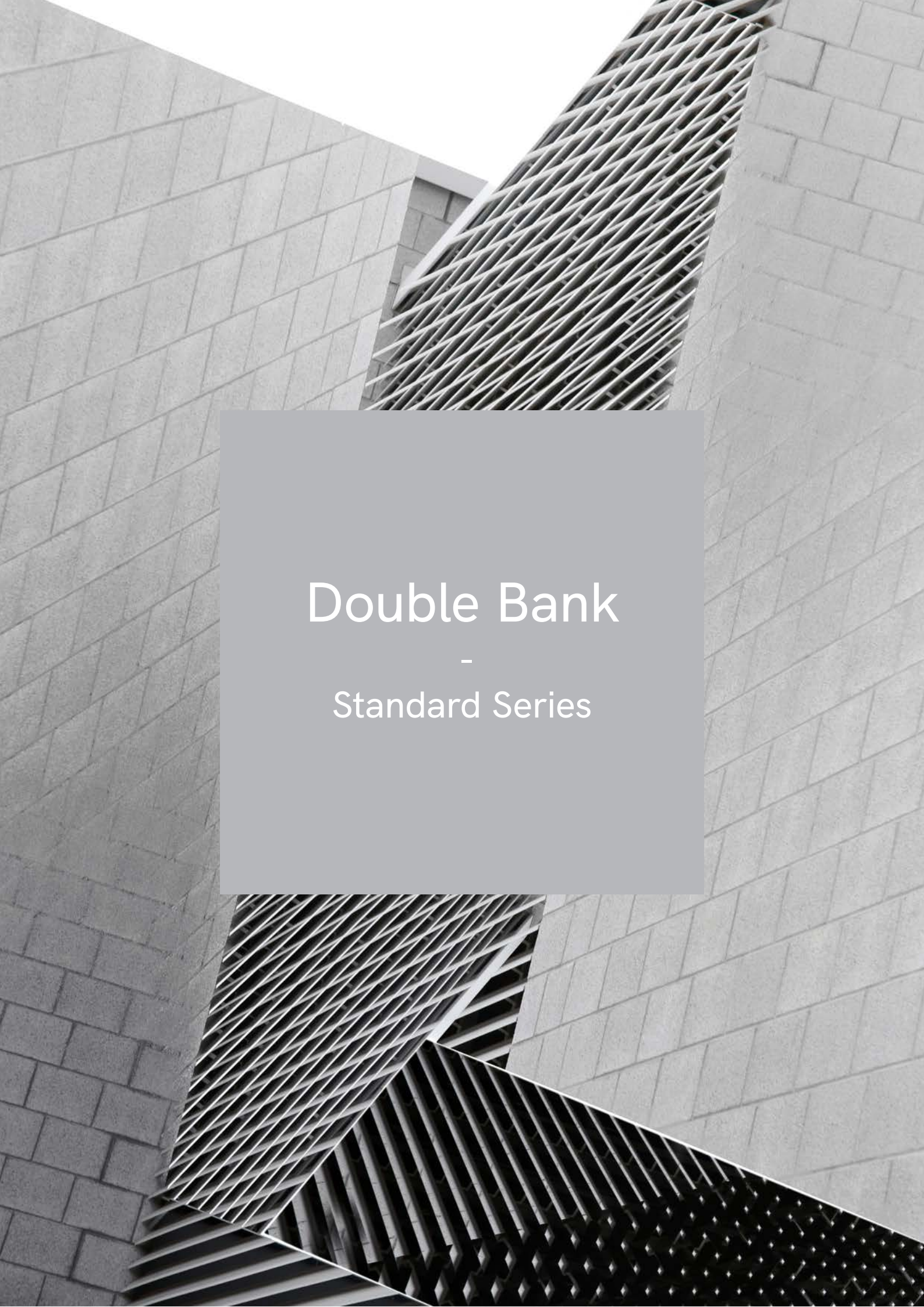


DB Standard - Series	
Class A2: Excellent rain defense below 2.0m/s wind speed. Very good aerodynamics.	
SB Standard - Series	
Class B1: Good rain defense with excellent aerodynamic performance	
SB Lite - Series	
Class C1: Fair rain defense with excellent aerodynamic performance	

SB Lite - Series		Aerodynamic			
		1	2	3	4
Rain Defense	A				
	B				
	C	p	p	p	p
	D	p			

DB Standard Series		Aerodynamic			
		1	2	3	4
Rain Defense	A	p	p	p	p
	B	p	p		
	C				
	D				

SB Standard Series		Aerodynamic			
		1	2	3	4
Rain Defense	A				
	B	p	p	p	p
	C	p	p		
	D	p			



Double Bank

-

Standard Series

DB STANDARD – SERIES

The classical double bank standard louver is the refinement of the original purpose of louvers. It is a static component balancing airflow with defense against the ingress of other elements. As opposed to the twin blades of typical double bank louvers, the DB Standard – Series features a single extruded blade with double banks, and a typical 65-80mm pitch. The blades can be arrayed:

- Horizontally
- Vertically



FINISHING OPTIONS

These standard material options are available for our DB Standard -Series systems:

- Aluminium
- Mild steel
- Stainless steel

Decorative finishes include:

- Anodized
- Hairline finish
- PVF2 fluorocarbon 3-coat with single RAL colour code.

Finishes will be applied to all visible surfaces.

INSTALLATION OPTIONS

DB Standard-Series Louvers may be installed with the following optional accessories:

- Meshes, bird or insect.
- Blanking panels
- Extended sills

DB - Standard Series

GENERAL QUALITIES

The practical utility of this louver is of the highest consideration while still preserving aesthetic value. The DB Standard-Series features an innovative blade profile that becomes more aerodynamically efficient at higher discharge rates. While it can be used as a decorative element, this system is mainly recommended for rain protection in structural openings and for ventilation of machine rooms.

Rain Defense

The DB Standard louvers may be used where minimal water penetration to Class B standard is necessary. Where maximal rain defense is required, the jointed blade should be used.

Aerodynamics

DB Standard Louvers have good Aerodynamic performance, with a pressure drop curve suitable for machinery rooms.

This louver is classified at a minimum of B1 using the BS EN13030 standard.



TYPICAL SPECIFICATIONS

Weather-proof louver blades, structural steel or non-structural aluminium supporting frame and subframes, including sealant and all necessary fittings, anodized or fluorocarbon-coated.

Blade length is typically 1200mm and does not exceed 1500mm. Mullions will be installed for louver sizes above 1200mm in length. Blades are screwed onto a louver frame, with a minimum free area of 50%.

Visible blades, frames and mullions are typically of thickness 1.5mm but may be changed on request. Subframes or structural frames are of 2 to 5mm thickness as necessary.

Supporting fixings are also of Aluminium 6063 T5, Mild Steel or Stainless Steel 304 or 316 as is appropriate for site conditions.

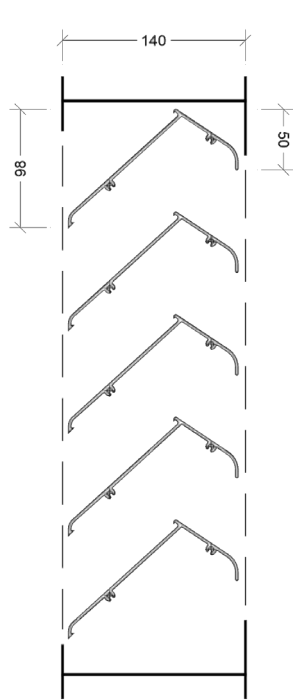
All installation options are available at any size.

PERFORMANCE SUMMARY

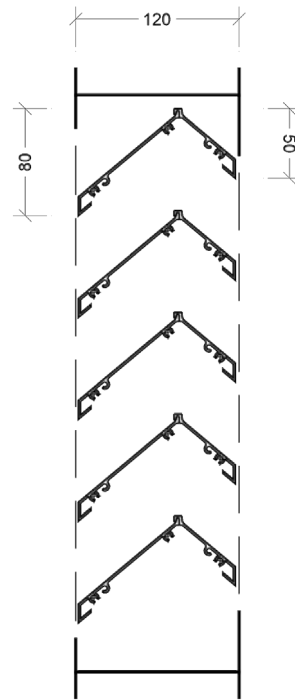
- Excellent aerodynamics rating
- Good rain defense rating
- Suitable for most installations

DB Standard – Series Louvers are a robust option meant for more practical applications, capable of acting as the sole line of defense against water or other intrusive elements while retaining the air-flow utility associated with louvers. It is recommended that blade pitch be adjusted for either greater rain protection or better aerodynamics.

3

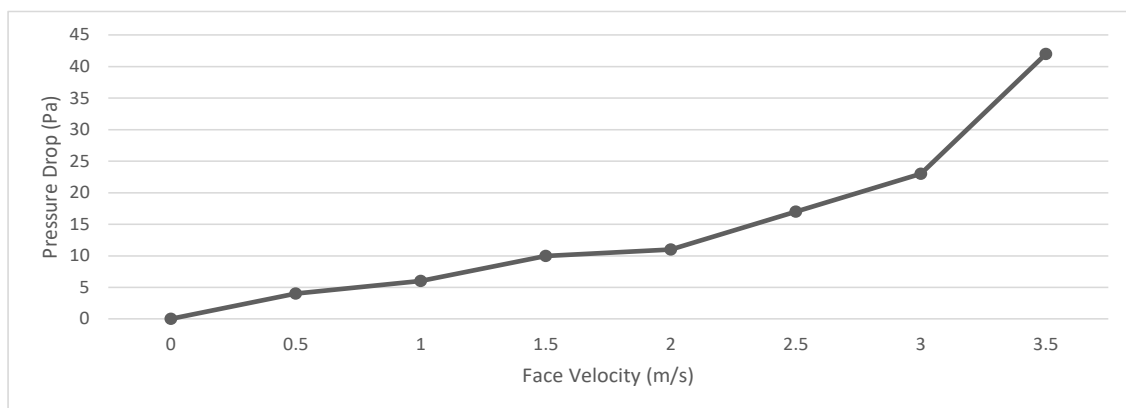


Double Bank
Uniblade_Section



Double Bank
Jointedblade_Section

Typical Pressure Drop Curve





Single Bank

-

Standard Series

SB STANDARD – SERIES

An upturned blade style and more robust border frame for the SB Standard Series makes it more useful for rain defense while keeping the aerodynamic properties necessary for systems requiring high ventilation. The SB Standard – Series features a single bank high aerodynamic performance blade with a typical 80mm pitch. The blades can be arrayed:

- Horizontally sloped down
- Horizontally sloped up
- Vertically



FINISHING OPTIONS

These standard material options are available for our louver systems:

- Aluminium
- Mild steel
- Stainless steel

Decorative finishes include:

- Anodized
- Hairline finish
- PVF2 fluorocarbon 3-coat with single RAL colour code.

Finishes will be applied to all visible surfaces.

INSTALLATION OPTIONS

Louvers may be installed with several optional accessories:

- Installation by clip or screw
- Meshes, bird or insect.
- Blanking panels
- Hidden mullion is available on request.

SB - Standard Series

GENERAL QUALITIES

The aerodynamic performance and high ventilation capacity of this louver system is preserved while also providing good rain defense. Frame is Blade pitch and length can be changed on request to match existing louvers during renovation projects, as can the addition or removal of mullions and frames.

Rain Defense

The SB Standard louvers may be used where minimal water penetration to Class B standard is acceptable, but not where rain defense is paramount.

Aerodynamics

SB Standard Louvers have minimal effect on inflow and outflow pressure drop prioritise over rain defense aerodynamic.

This louver is classified at a minimum of B1 using the BS EN13030 standard.

PERFORMANCE SUMMARY

- Excellent aerodynamics rating
- Good rain defense rating
- Suitable for most installations

SB Standard – Series Louvers are most designer and maintenance friendly, suitable for locations where protection of machinery from water ingress is of lesser concern.

TYPICAL SPECIFICATIONS

Weather-proof louver blades, structural steel or non-structural aluminium supporting frame and subframes, including sealant and all necessary fittings, anodized or fluorocarbon-coated.

Blade length is typical 1200mm does not exceed 1500mm. Mullions will be installed for louver sizes above 1200mm in length. Blades can be either screwed or clipped onto a frame or mullions, as is suitable for superior wind load support or to allow for expansion as required. Minimum free area of 50%.

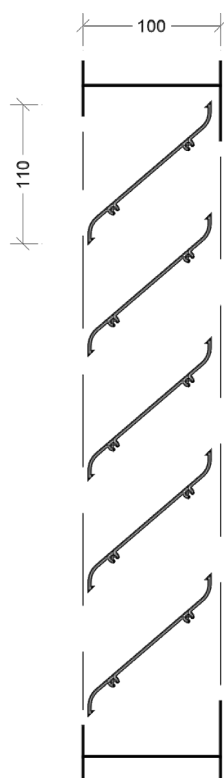
Visible blades, border frames and mullions are typically of thickness 1.5mm but may be changed on request. Subframes and main frames are of 2 to 5mm thickness as necessary.

Supporting fixings are also of Aluminium 6063 T5, Mild Steel or Stainless Steel 304 or 316 as is appropriate for site conditions.

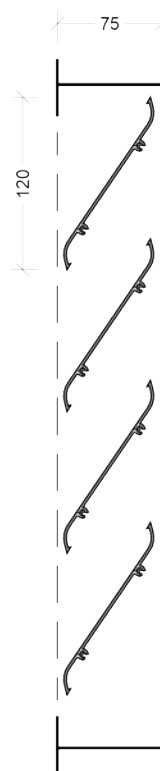
All installation options are available at any size.



4

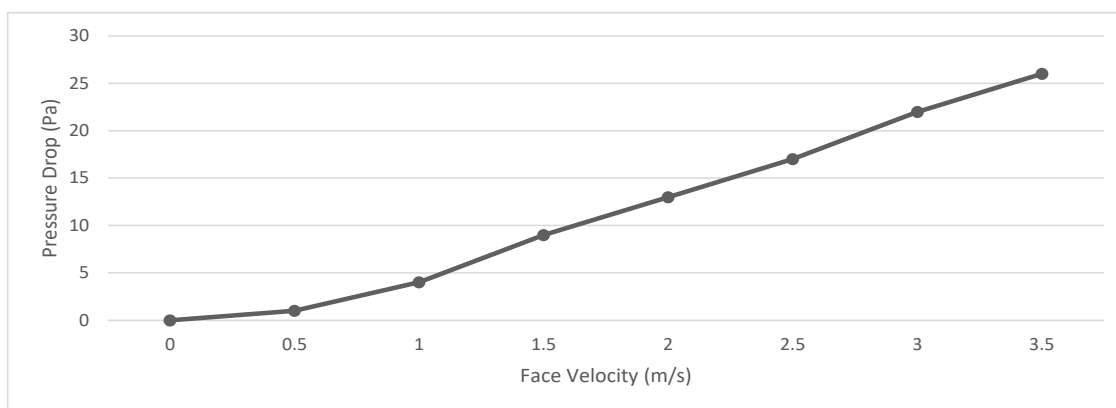


Single Bank
Standard_Section



Single Bank
Standard_Section

Typical Pressure Drop Curve





Single Bank

-

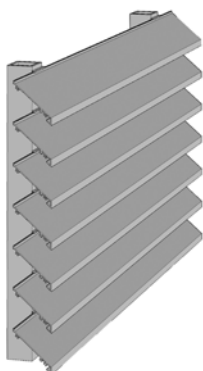
Lite Series

SB LITE - SERIES

The simple blade style and inherent multiple fixing options for the SB Lite Series makes it ideal for screening or where aesthetics and ventilation is more important than rain defense.

The SB Lite – Series features a single bank high aerodynamic performance blade with a typical 50 or 75mm pitch. The blades can be arrayed:

- Horizontally sloped down
- Horizontally sloped up
- Vertically
- In other orientations by request



FINISHING OPTIONS

These standard material options are available for our louver systems:

- Aluminium
- Mild steel
- Stainless steel

Finishes will be applied to all visible surfaces.

INSTALLATION OPTIONS

Louvers may be installed with several optional accessories:

- Installation by clip or screw
- Visible or hidden mullions
- Meshes, bird, insect or dust guards.
- Blanking panels



SB Lite - Series

GENERAL QUALITIES

The balance of this louver series is optimized towards aerodynamic performance and high ventilation capacity, with a blade profile such that installation requirements are uncomplicated and therefore suitable for most installation sites. Blade pitch and length can be changed on request to match existing louvers during renovation projects, as can the addition or removal of mullions and frames.

Rain Defense

SB Lite Louvers have minimal effect on inflow and outflow pressure drop and are the most aerodynamically stable.

This louver is classified at a minimum of C1 using the BS EN13030 standard.

PERFORMANCE SUMMARY

- Flexible installation
- High Customisation
- Excellent aerodynamics rating
- Fair rain defense rating

SB Lite – Series Louvers are most designer and maintenance friendly, suitable for locations where protection of machinery from water ingress is of lesser concern.

TYPICAL SPECIFICATIONS

Weather-proof louver blades, structural steel or non-structural aluminium supporting frame and subframes, including sealant and all necessary fittings, anodized or fluorocarbon-coated.

Blade length is typical 1200mm does not exceed 1500mm. Mullions will be installed for louver sizes above 1200mm in length. Blades can be either screwed or clipped onto a frame or mullions, as is suitable for superior wind load support or to allow for expansion as required.

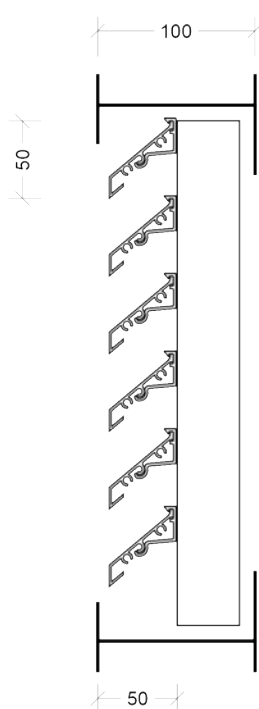
Visible blades, border frames and mullions are typically of thickness 1.5mm but may be changed on request. Subframes and main frames are of 2 to 5mm thickness as necessary

Supporting fixings are also of Aluminium 6061 T5, 6063 T5, Mild Steel or Stainless Steel 304 or 316 as is appropriate for site conditions.

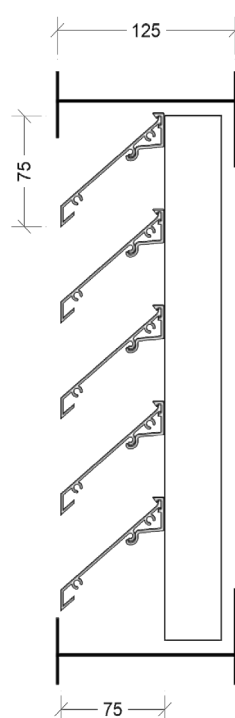
All installation options are available at any size.



5

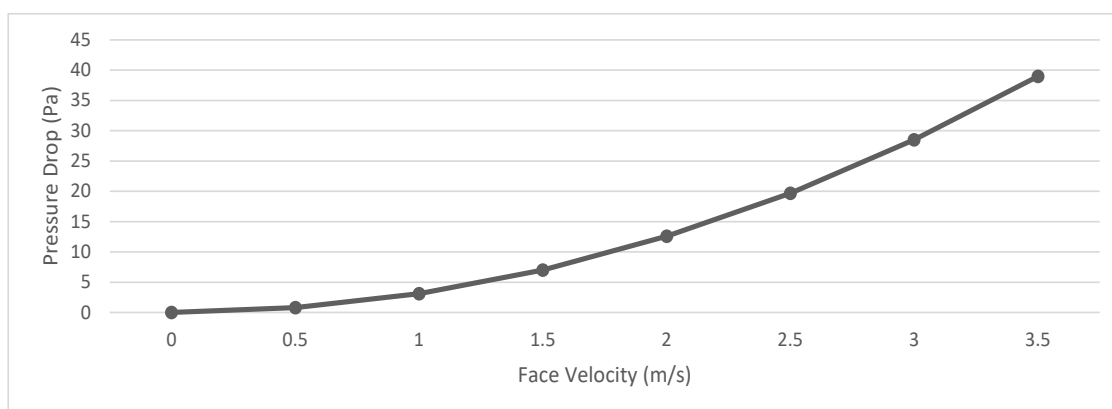


Single Bank
Lite_Section



Single Bank
Lite Extended_Section

Typical Pressure Drop Curve



Terminology

■ Aerodynamic Coefficient :

A unitless value determined by actual airflow testing, this represents the effectiveness of the louver system passing air from one side to the other. This value takes due account of depth and profile shape when subjected to various air velocities. To provide an accurate value that can be used for airflow performance analysis, values are recorded for both inlet and exhaust. Typical values for performance louvers range from 0.1 to 0.5, the higher number being more effective at air passage.

■ Blade Pitch

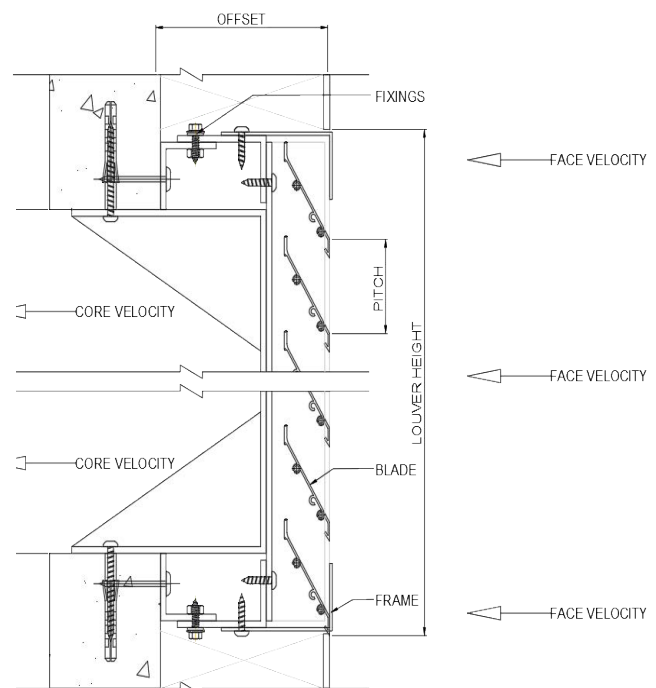
The dimension of each individual blades spacing within the louver panel. It is usually expressed in millimeters (mm).

■ Core Area

The area of louver panel minus the louver framing and fixing flanges. It is generally expressed in square meters (m^2).

■ Core Velocity

The speed at which air passes through once Core Area is determined. It is generally expressed in meter per second (m/s).



■ Free Area

The minimum area through which air can pass and usually expressed as a percentage of the total louver size. Although generally used as a ‘rule of thumb’ for louver sizing, it does not provide an accurate assessment of louver performance as it takes no account for the effects of panel depth, configuration and blade profile on airflow performance.

■ Face Area

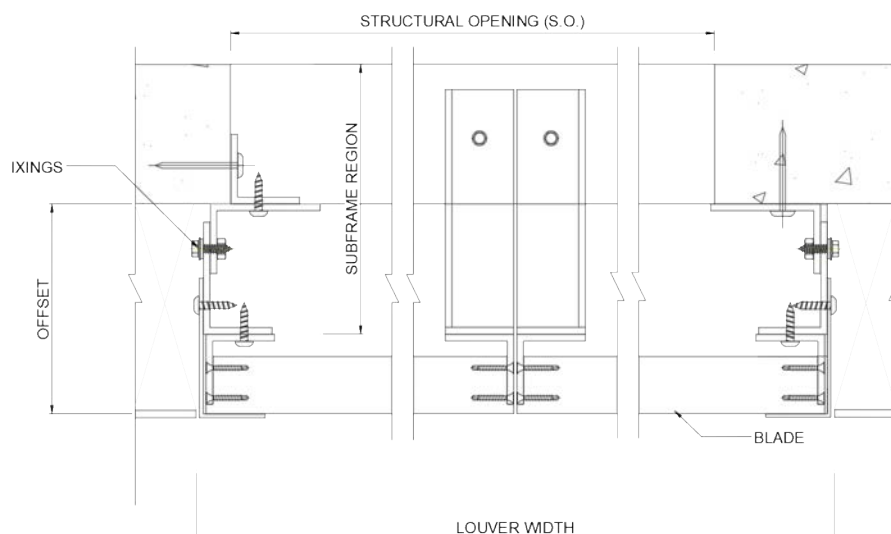
The complete area of the louver panel including louver framing and fixing flanges. It is generally expressed in square meters (m^2).

■ Face Velocity

Based on the louvers face area, the speed at which air approaches the face. It is generally expressed in meter per second (m/s).

■ Pressure Drop

Base on flow, aerodynamic coefficient and specific density of air, the pressure drop is resistance to flow incurred when air moves from one side of the louver to the other. Generally expressed in Pascals (Pa).





SEE MORE

NOTE

Contract Detail

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