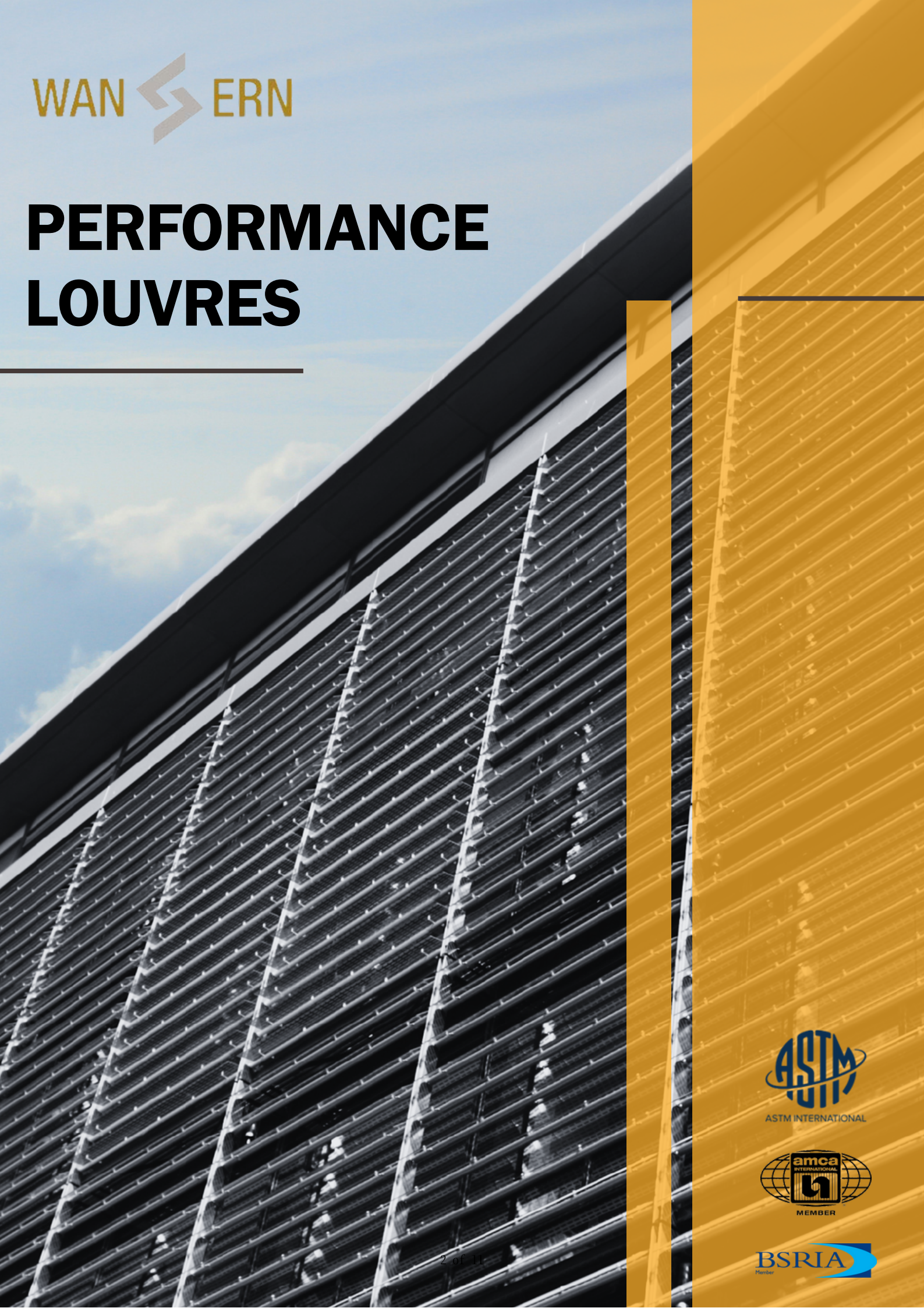
WAN ERN

PERFORMANCE LOUVRES



ASTM INTERNATIONAL

MEMBER

BSRIA

WAN SERN SUPPLIES (WSS). Your Preferred Partner in Architectural Products.

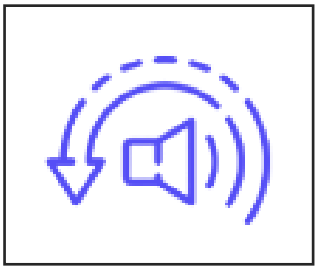
WSS is efficient and dedicated to innovative and customer-centric solutions. In addition to providing high-quality products, we firmly believe in achieving market leadership through excellent customer interaction and service. Therefore, we are committed to establishing close partnerships with customers, owners, and consultants.

What We Provide…

Our system are expertly engineered by our dedicated team to provide solution and design to meet owners, consultants and engineers requirement. Our versatile range of louvers includes Frame, Frameless, Vertical and Acoustic options, showcasing our commitment to providing diverse choices to meet specific project requirements. The Frame and Frameless louvers offer aesthetic flexibility, allowing seamless integration into various architectural designs. The Vertical louvers enhance both form and function, providing effective solutions for specific spatial considerations. Additionally, our Acoustic louvers prioritize sound management, ensuring a harmonious and noise-controlled environment.

Air Performance

Rain Defence



Noise Reduction

Whether your needs involve building ventilation, acoustics, screening, or wind protection, we offer a diverse range of louver systems to meet your requirements. **WSS's** manufacturing facilities in Asia are strategically positioned to deliver the most cost-effective and customized solutions, addressing the increasingly stringent demands of project schedules.

How to Specify The Right Louver

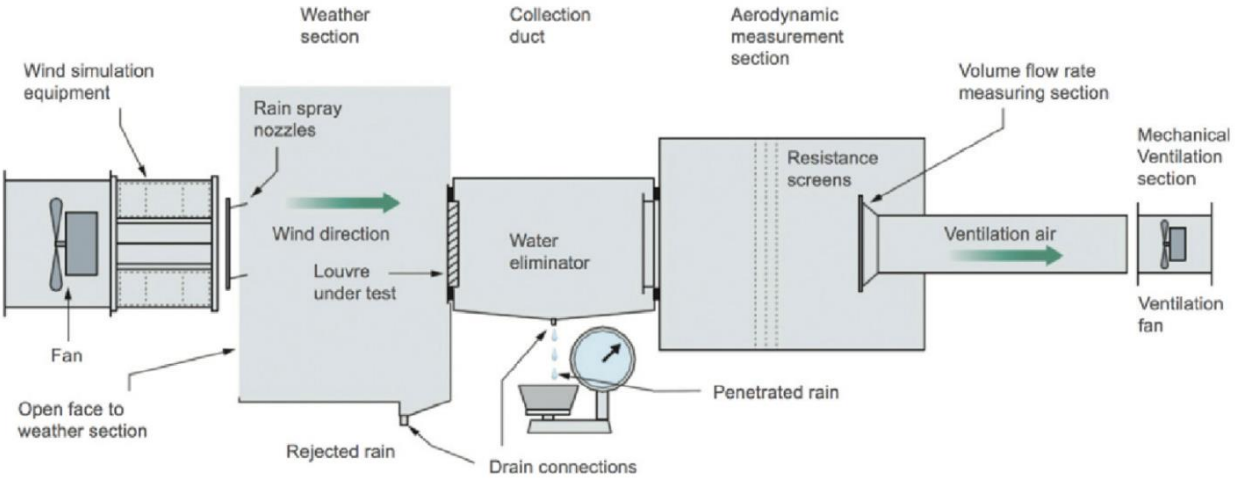
- Project site location
- Local weather conditions
- Louver locations on the building
- Building use behind the louvers
- Degree of acceptable water ingression
- Airflow rate and pressure drop requirements
- Acoustic requirements
- Integration of building and louver aesthetics

Testing

Weather Louvre: UK BSRIA/US AMCA Testing

- BS EN 13030:2001 "Ventilation for buildings. Terminals. Performance testing of louvers subjected to simulated rain" by BSRIA Laboratories in UK.

- ASTM E90-09(2016) "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" by Riverbank Acoustical Laboratories in US.



Two key performance areas:

1. Rain Defence Classification

-The ability to prevent rainwater from penetrating the Louvre.

NOTE: Water Penetration Effectiveness is measured for each of eight face velocities between 0m/s and 3.5m/s under fan driven wind at a speed of 13m/s and water sprayed as rainfall at a rate of 75 l/h condition.

Class	Effectiveness	Max. allowed rain penetration l/h/m²
A	99% to 100%	0.75
B	95% to 98%	3.75
C	80% to 94%	15.00
D	Below 80%	Greater than 15.00

2. Discharge Loss Coefficient Classification

-A high coefficient means low resistance and high airflow performance.

NOTE: Discharge/entry loss coefficient is expressed as a single class, based on an average result over five air velocities. Class 1 indicates the least and Class 4 the most resistance to airflow. The higher the value, the lower the energy usage.

Class	Airflow Effectiveness	Performance Rating
1	0.4 to 1	Excellent
2	0.3 to 0.399	Very Good
3	0.2 to 0.299	Good
4	0.199 & Below	Fair

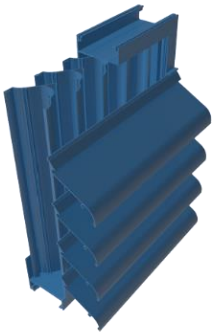
Frameless Louvre System

Air Performance

Rain Defence

IPL-175 (AL75RS-3)
Horizontal Single Bank Louvre

IPL-275 (AL150RS-9)
Horizontal Double Bank Louvre



IPL-375 (TBL150)
Triple Bank Louvre

IPL-160 (AL75RS-5)
Horizontal Single Bank Louvre

Dimension & Appearance

Louver Model	Type	Louver Depth (mm)	Blade Spacing (mm)	Visual Blade Orientation	Visual Impact of Mullions/Jambs
IPL-175	Horizontal Single Bank Louvre	125	75	Horizontal	Hidden
IPL-275	Horizontal Double Bank Louvre	148	75	Horizontal	Hidden
IPL-375	Triple Bank Louvre	148	75	Horizontal	Hidden
IPL-160	Horizontal Single Bank Louvre	125	60	Horizontal	Hidden

Rain Defense & Airflow

Louver Model	Type	Airflow Co-efficient	Airflow Rating	Rain Defence class under different Airflow Velocity m/s							
				0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
IPL-175	Horizontal Single Bank Louvre	0.444	Class 1: Excellent	C	C	D	D	D	D	D	D
IPL-275	Horizontal Double Bank Louvre	0.248	Class 3: Good	A	A	A	A	C	C	C	D
IPL-375	Triple Bank Louvre	0.150	Class 4: Fair	A	A	A	A	A	A	A	B
IPL-160	Horizontal Single Bank Louvre	0.430	Class 1: Excellent	C	C	C	C	D	D	D	D

Frame Louvre System

Air Performance

Rain Defence

FPL-162 (AL75RS)
Horizontal Single Bank Louvre

FPL-270 (STL129)
Horizontal Double Storm Louvre

Dimension & Appearance

Louver Model	Type	Louver Depth (mm)	Blade Spacing (mm)	Visual Blade Orientation	Visual Impact of Mullions/Jambs
FPL-162	Horizontal Single Bank Louvre	76	62	Horizontal	Visual Mullion
FPL-270	Horizontal Double Storm Louvre	127	70	Horizontal	Visual

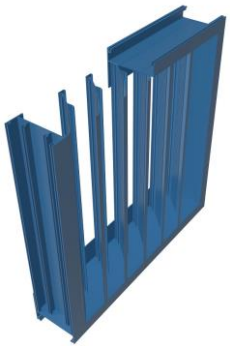
Rain Defense & Airflow

Louver Model	Type	Airflow Co-efficient	Airflow Rating	Rain Defence class under different Airflow Velocity m/s							
				0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
FPL-162	Horizontal Single Bank Louvre	0.370	Class 2: Very Good	C	C	C	D	D	D	D	D
FPL-270	Horizontal Double Storm Louvre	0.211	Class 3: Good	A	A	A	B	C	D	D	D

Vertical Louvre System

Air Performance

Rain Defence



VPL-165
(VSBL95-3)
Vertical Single Bank Louvre

VPL-275
(VDL150-3)
Vertical Double Bank Louvre

VPL-265S
(VSTL128-4)
Vertical Double Storm Louvre

VPL-265D
(VSTL145-2)
Vertical Double Storm Louvre

Dimension & Appearance

Louver Model	Type	Louver Depth (mm)	Blade Spacing (mm)	Visual Blade Orientation	Visual Impact of Mullions/Jambs
VPL-165	Vertical Single Bank Louvre	92.5	65	Vertical	Visual
VPL-275	Vertical Double Bank Louvre	150	75	Vertical	Hidden
VPL-265S	Vertical Double Storm Louvre	128	65	Vertical	Visual
VPL-265D	Vertical Double Storm Louvre	145	65	Vertical	Visual

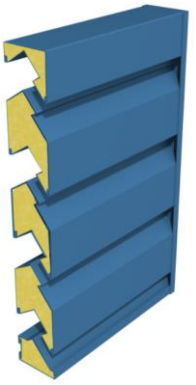
Rain Defense & Airflow

Louver Model	Type	Airflow Co-efficient	Airflow Rating	Rain Defence class under different Airflow Velocity m/s							
				0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
VPL-165	Vertical Single Bank Louvre	0.322	Class 2: Very Good	B	B	B	B	B	C	C	C
VPL-275	Vertical Double Bank Louvre	0.281	Class 3: Good	A	A	A	A	A	A	A	A
VPL-265S	Vertical Double Storm Louvre	0.290	Class 3: Good	A	A	A	A	A	A	A	A
VPL-265D	Vertical Double Storm Louvre	0.314	Class 2: Very Good	A	A	A	A	A	A	A	B

Acoustic Louvre System

Noise Reduction

V150-2
Horizontal Acoustic
Single Bank Louvre



V150-2(Z)
Horizontal Acoustic
Double Bank Louvre

V300-2
Horizontal Acoustic
Double Bank Louvre

Dimension & Appearance

Louver Model	Type	Louver Depth (mm)	Blade Spacing (mm)	Visual Blade Orientation	Visual Impact of Mullions/Jambs
V150-2	Horizontal Acoustic Single Bank Louvre	150	250	Horizontal	Visual
V150-2(Z)	Horizontal Acoustic Double Bank Louvre	150	250	Horizontal	Visual
V300-2	Horizontal Acoustic Double Bank Louvre	300	300	Horizontal	Visual

Acoustic Louver – Sound Transmission Loss

Louver Model	Octave Band Centre Frequency (Hz)	63	125	250	500	1k	2k	4k	8k	STC
V150-2	Transmission Loss	3	7	6	8	11	15	14	13	12
	Noise Reduction Index	10	12	11	14	18	22	22	24	
V150-2(Z)	Transmission Loss	4	6	6	10	13	15	16	15	13
	Noise Reduction Index	11	12	11	15	20	23	25	27	
V300-2	Transmission Loss	4	8	9	13	17	20	19	19	17
	Noise Reduction Index	11	13	15	19	24	28	28	31	

Photo Gallery

Photo Gallery

WAN SERN  V Global

CERTIFICATE
OF PARTNERSHIP

This is to certify that WSS is the exclusive partnership of V Global Pte Ltd for the production of performance louvres, extrusion and other aluminium product:

WAN SERN SUPPLIES PTE LTD

Wan Sern Supplies Pte Lte

V Global Pte Ltd

Accreditations

WAN SERN SUPPLIES (WSS).

ISO 45001:2018
Cert. No. OH&SMS-SG-144

Accredited Certification Body
QS-2020-22

ISO 14001:2015
Environmental Management System
Cert. No. E3886

V GLOBAL PTE LTD.

WAN ERN

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