

Universal Louvre

Screening and Natural Ventilation

Universal Louvre is an attractive high performance louvre system available in a variety of product options, materials and finishes to suit all applications.

Innovative design and exacting quality standards during all stages of manufacture make Universal Louvre ideally suited for screening, cladding, ventilation and ventilation with rain protection.

This ability to perform has won Universal Louvre various international design awards and enables it to resist all contenders for its claim to be the **best performance louvre in the world**.

The Colt Universal Louvre range is manufactured using **100% recycled** aluminium for the principal body components.



Benefits & Features

- *Innovative design to meet all applications.*
- *Highly efficient natural ventilator. Double and Triple bank Universal Louvre offers the best rain protection achievable.*
- *Universal Louvre can be roll formed in a wide range of materials to suit your specific project.*
- *Universal and flexible installation configurations.*
- *Large selection of accessories.*
- *Curved edges to allow efficient airflow.*
- *Low maintenance needs.*

Universal Louvre - Accessories

BEFORE - Open faced carpark



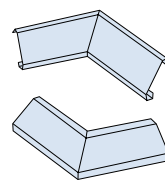
AFTER - Screened with Single bank Universal Louvre



Single bank Universal Louvre was used for ventilation and protection from the rain. In darker areas at lower levels, perforated Single bank Universal Louvre was used to allow natural daylight to enter the building, whilst still allowing external vision.

Corners

Internal / external corners
for *shallow / deep* louvres.

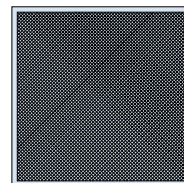


Internal

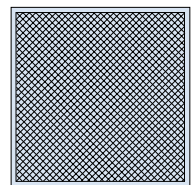
External

Guards

Birdguard / insect guard



Insect



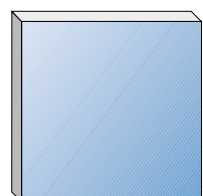
Bird

Blanking Panels

Single skin / insulated



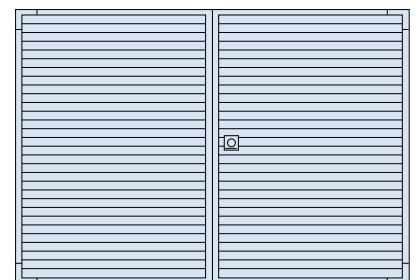
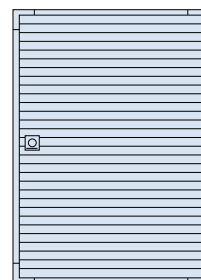
Single
Skin



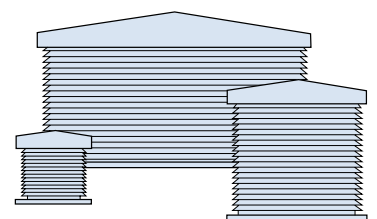
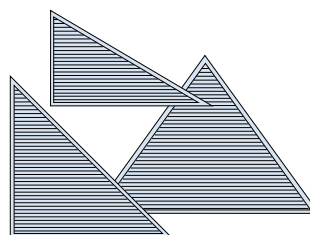
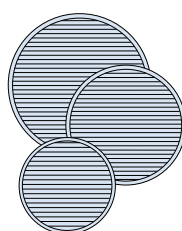
Insulated

Doors

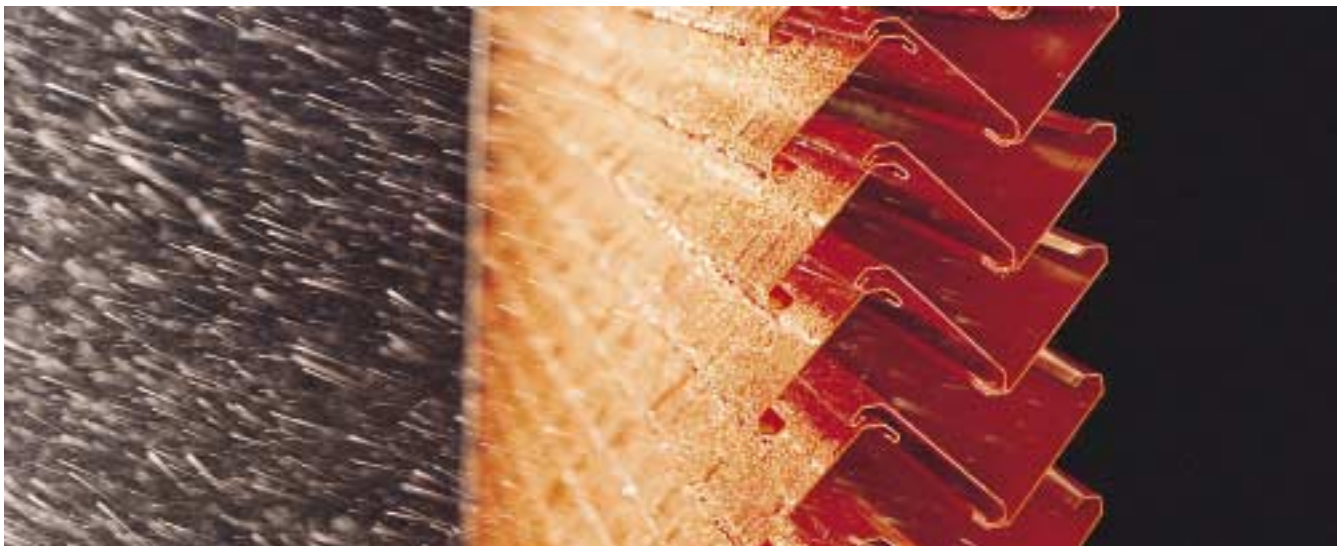
Single / double



Special Shapes and Turrets



Accessories will be manufactured
to suit particular project
requirements.



General Description

There are three louvre bank options:

Single	(one louvre deep)	1UL
Double	(two louvres deep)	2UL
Triple	(three louvres deep)	3UL



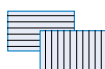
There are two front louvre profiles:

Shallow	(50mm pitch)	S
Deep	(100mm pitch)	D



There are two arrangements:

Horizontal	H
Vertical	V



Both arrangements can also be inverted.

There are three options for the principal components:

Aluminium	100% recycled alloy type 3005 (Colterra) or 3105 to BS1470
Mild Steel	Galvanised type Z2 to BS 2989
Stainless Steel	Type 316 to BS1449

Perforated, stucco and pre-coated materials are also available and can be used to singular effect (subject to material specification and quantity).

There are many decorative finish options, including:

Mill Finish (aluminium)
Stoved Polyester Powder Paint
Anodised (aluminium)

The applied finishes can be supplied in two coverage levels:

Total (all principal components) or
Partial (front louvres and frames only).

There are a large selection of optional accessories such as:

Mitred Corners
Blanking Panels
Special Shapes
Acoustic Modules
Guards
Doors
Turrets

Cladding & Screening

Its consistent appearance and installation flexibility make **Single bank** Universal Louvre ideal for cladding and screening applications.

Ventilation

The carefully designed aerodynamic louvre profile makes Universal Louvre an extremely efficient ventilator which offers low resistance to airflow. **Single bank** Universal Louvre is probably the most aerodynamically efficient louvre available anywhere.

Ventilation & Rain Defence

Single bank Universal Louvre offers some rain defence but is only recommended for use when the location is sheltered or when rain penetration is acceptable.

Double and Triple bank Universal Louvre offer the best available compromise to the conflicting performance demands of ventilation and rain defence. The louvres unite to create drain channels for rain water while still permitting an easy path for airflow.

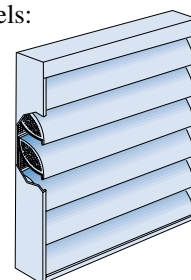
Noise Control (optional)

Acoustic louvre panels can be mounted behind the louvre. If a single bank of panels does not provide the required noise levels then a second bank may be added. As an alternative, duct silencers may be selected to give the desired noise reduction.

There are two Acoustic Louvre Models:

Type R -
 Optimum acoustic performance with normal pressure drop

Type LP -
 Normal acoustic performance with minimum pressure drop



For performance details, please contact Colt International, reference Data Sheet DS 31.

Universal Louvre - 1 UL (Single bank)

Product Specification (N.B.S)

Manufacturer Colt International Limited
New Lane Havant
Hampshire PO9 2LY

Telephone 01705 451111
Fax 01705 454220

Product Reference Universal Louvre
Type 1UL/SH

Material All principal components manufactured
from Aluminium alloy type 3005
(Colterra)

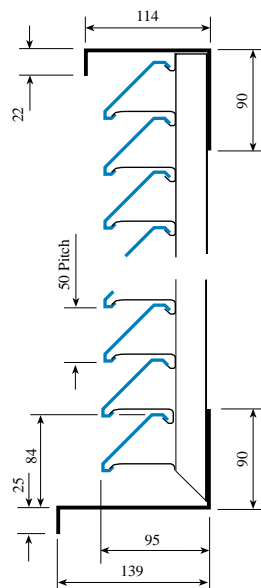
Blade Pitch and Angle 50 mm @ 45 degrees

No. of Louvres 1 (single bank)

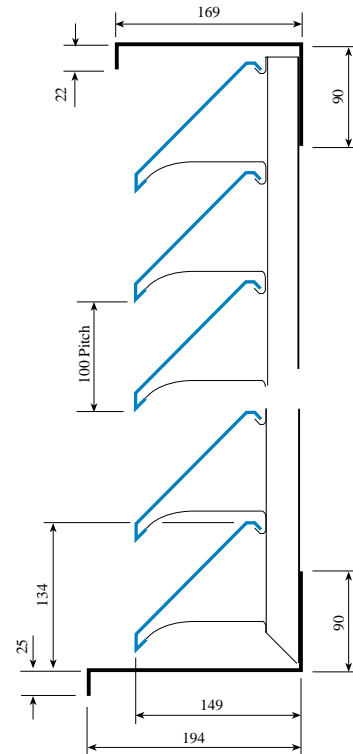
Special Features Louvre blades shall be roll formed to an aerodynamically efficient profile and clipped to concealed structural supporting mullions. The system shall achieve a minimum aerodynamic performance coefficient (C_v) of 0.435 (inlet) with birdguard fitted to the rear to facilitate easy cleaning.

Decorative Finish Polyester Powder Paint - Partial (or Total) coverage with mill finish birdguard.

Shallow Section

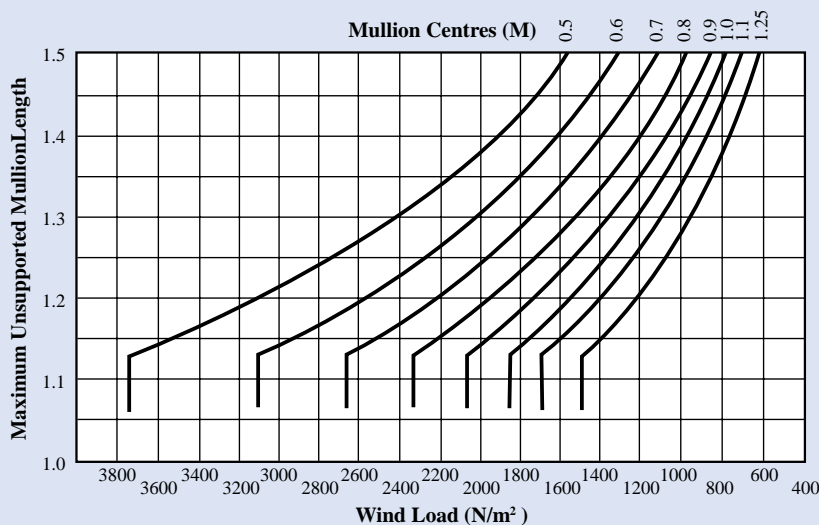


Deep Section

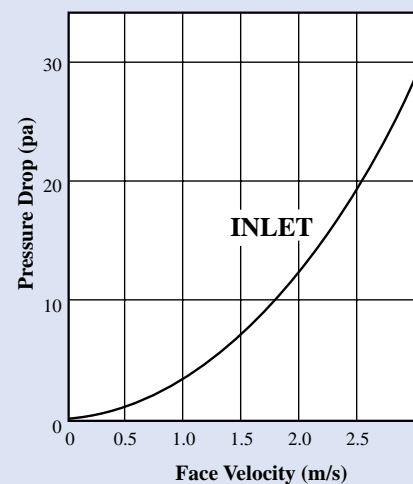


Note: Blade pitch and angle can be modified if required.

Wind Load Calculation



Pressure Drop Curve



Please contact Colt International for details on Deep Section Universal Louvre

Universal Louvre - 2 UL (Double bank)

Product Specification (N.B.S)

Manufacturer Colt International Limited
New Lane Havant
Hampshire PO9 2LY

Telephone 01705 451111
Fax 01705 454220

Product Reference Universal Louvre
Type 2UL/SH

Material All principal components manufactured
from Aluminium alloy type 3005
(Colterra)

Blade Pitch and Angle 50 mm @ 45 degrees

No. of Louvres 2 (double bank) - for tangential separation
not chevron

Special Features

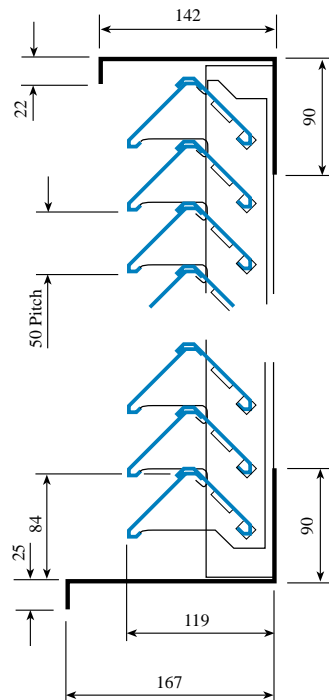
Louvre blades shall be roll formed to an aerodynamically efficient profile to achieve 'tangential separation' and clipped to concealed hollow structural supporting mullions with efficient water drainage onto cill. The system shall achieve a minimum aerodynamic performance coefficient (Cv) of 0.308 (inlet) with birdguard fitted to the rear to facilitate easy cleaning. The following weathering effectiveness shall be achieved when tested in accordance with HEVAC test at a windspeed of 13m/sec:

Classification	Air Intake Velocity
"A"	1.0 m/s
"B"	2.2 m/s
"C"	3.0 m/s

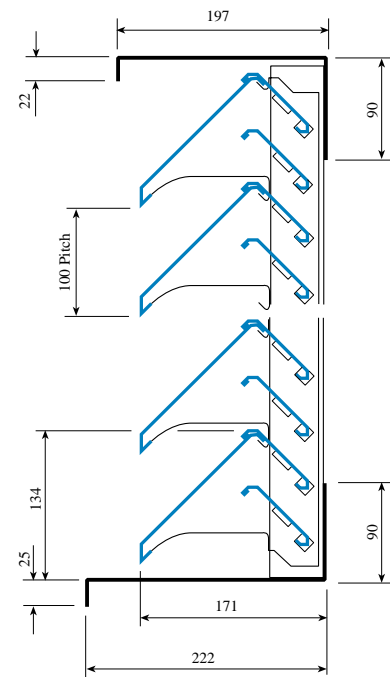
Decorative Finish

Polyester Powder Paint - Partial (or Total) coverage with mill finish birdguard.

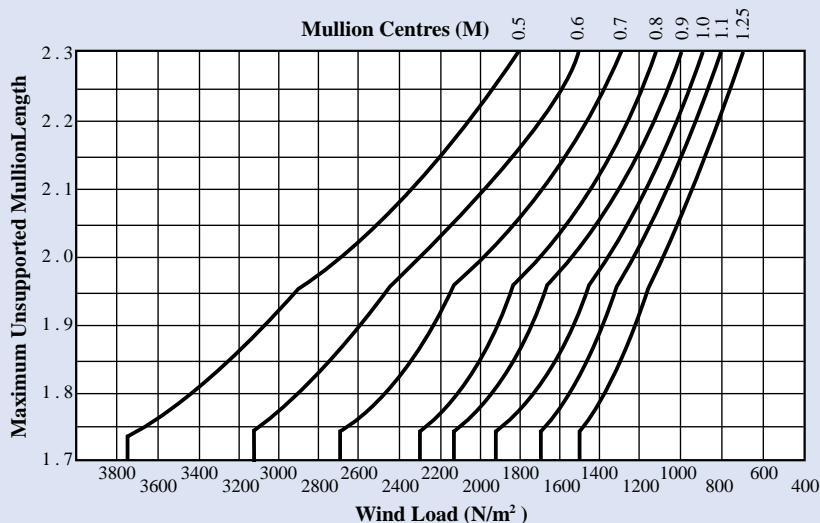
Shallow Section



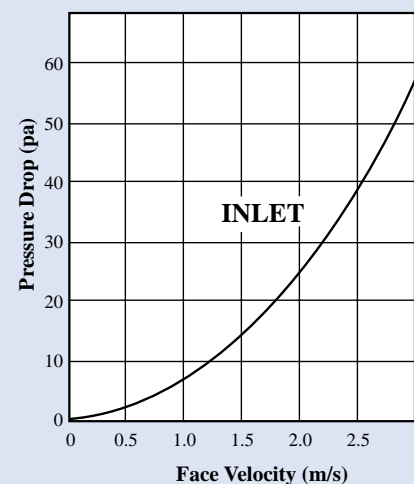
Deep Section



Wind Load Calculation



Pressure Drop Curve



Please contact Colt International for details on Deep Section Universal Louvre

Universal Louvre - 3 UL (Triple bank)

Product Specification (N.B.S)

Manufacturer Colt International Limited
New Lane Havant
Hampshire PO9 2LY

Telephone 01705 451111
Fax 01705 454220

Product Reference Universal Louvre
Type 3UL/SH

Material All principal components manufactured
from Aluminium alloy type 3005
(Colterra)

Blade Pitch and Angle 50 mm @ 45 degrees

No. of Louvres 3 (triple bank) - for tangential separation

Special Features

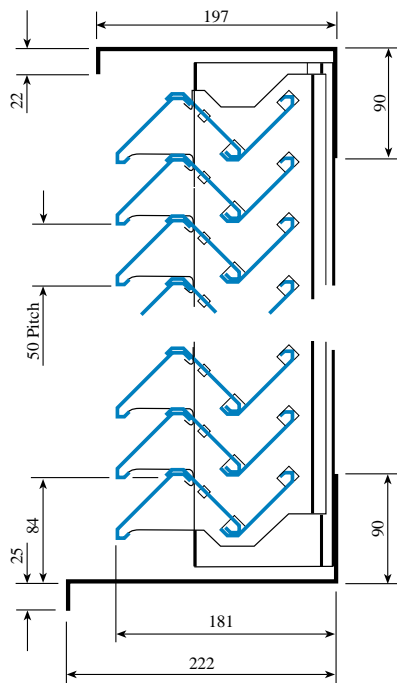
Louvre blades shall be roll formed to an aerodynamically efficient profile to achieve 'tangential separation' and clipped to concealed hollow structural supporting mullions with efficient water drainage onto cill. The system shall achieve a minimum aerodynamic performance coefficient (C_v) of 0.277 (inlet) with birdguard fitted to the rear to facilitate easy cleaning. The following weathering effectiveness shall be achieved when tested in accordance with HEVAC test at a windspeed of 13m/sec:

Classification "A" Air Intake Velocity 3.5 m/s

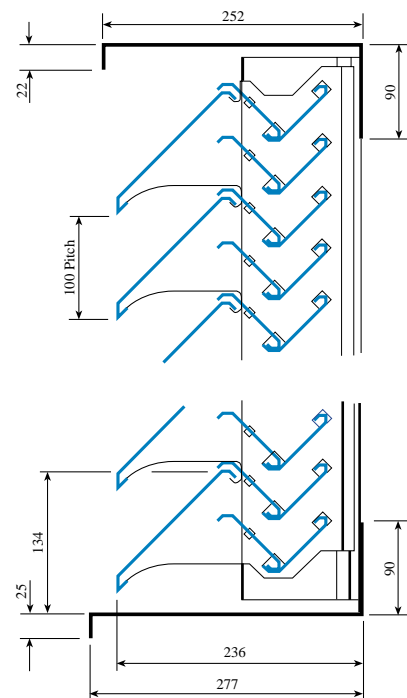
Decorative Finish

Polyester Powder Paint - Partial (or Total) coverage with mill finish birdguard.

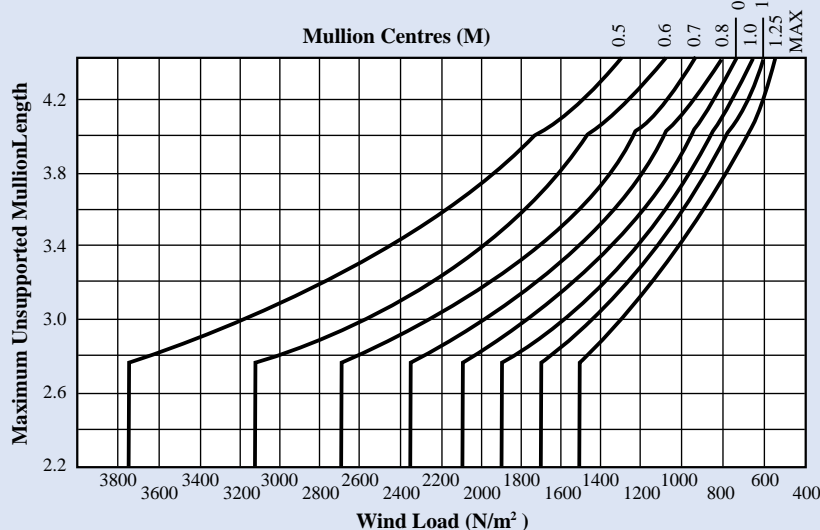
Shallow Section



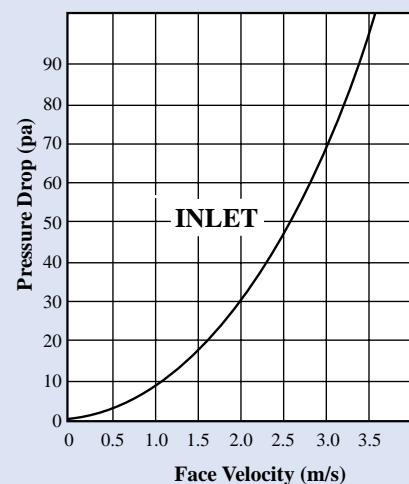
Deep Section



Wind Load Calculation



Pressure Drop Curve



Please contact Colt International for details on Deep Section Universal Louvre

Universal Louvre - Performance

Weather Effectiveness - Based on Shallow Section (SH)

Louvre Type	Core Velocity (m/s)							
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
1 UL/SH	0.73	0.66	0.60	0.62	0.60	0.59	0.51	0.50
	D	D	D	D	D	D	D	D
2 UL/SH	0.997	0.996	0.992	0.986	0.96	0.90	0.81	0.74
	A	A	A	B	B	C	C	D
3 UL/SH	1.00	0.999	0.998	0.998	0.997	0.996	0.996	0.995
	A	A	A	A	A	A	A	A

Tests carried out under 13m/s wind speed conditions

The HEVAC test standard

Class	Effectiveness
A	1.00 to 0.99
B	0.989 to 0.95
C	0.949 to 0.80
D	below 0.80

The HEVAC* test standard 'Laboratory Testing And Rating Of Weather Louvres When Subjected To Simulated Rain'

Aerodynamic Performance

Louvre Type	HEVAC Class	Inlet (cv)	Extract (cv)	Inlet ζ	Extract ζ
1 UL/SH	1	0.435	0.380	5.29	6.93
2 UL/SH	2	0.308	0.250	10.54	16.00
3 UL/SH	3	0.277	0.220	13.03	20.66

* Heating Ventilation and Air Conditioning Manufacturers' Association.

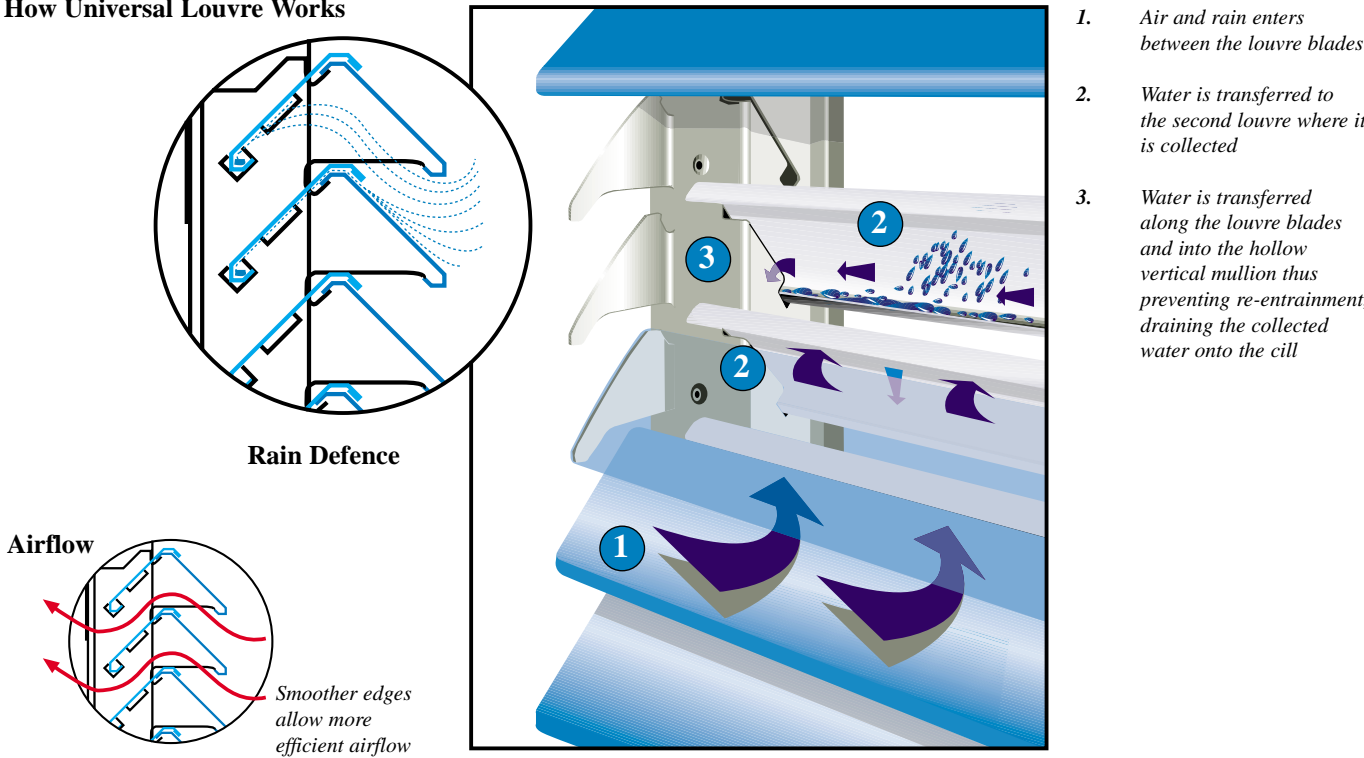
ζ Pressure Loss Factor

The performance data for Universal Louvre is taken from independent tests carried out by BSRIA in accordance with the HEVAC test standard.

Classifications Table for Universal Louvre

Louvre Type	HEVAC Class	Core Velocity	Weather Performance
3 UL	A3	Up to 3.5m/s	No appreciable water penetration
2 UL	A2	Up to 1.0m/s	No appreciable water penetration
2 UL	B2	1.0 to 2.2m/s	Some water entry but limited depth of penetration
2 UL	C2	2.2 to 3.5m/s	Significant water entry but limited depth of penetration
1 UL	D1	All velocities	Limited protection from wind driven rain

How Universal Louvre Works



Universal Louvre



Conventional 'Z' Louvre

Water leaves the louvre with an upward trajectory resulting in deep penetration. Sharp edges also create turbulence in the airflow.



Single bank Universal Louvre

Water leaves the louvre with a low trajectory reducing penetration. Smoother edges allow streamlined airflow.



Double bank Universal Louvre

Water is transferred to the underside of the second bank where it drains into the vertical mullion thus preventing re-entrainment.



Triple bank Universal Louvre

Water is transferred to the underside of the second bank. Fine droplets are tangentially separated and drained into a channel.

Extruded Universal Louvre

'E' Series Universal Louvre is the latest addition to the Colt range. It is an extruded aluminium, single bank louvre system available in two discrete 75mm pitch configurations for screening (ESC) and performance (ERD) applications.

For further information on 'E' series louvre, please contact Colt International reference leaflet No. PD 07.

Solar Shading Louvre

Universal Louvre can be used as an effective solar shading system which is designed to reduce heat build up and glare from the sun. Reflected diffused light enters the window thus preventing rooms becoming dark.

For further information on Solar Shading and Solar Control Systems, please contact Colt International reference leaflet No. DL 05.

Colt Service Ltd

Part of the Colt Group of companies, Colt Service offers a comprehensive range of service contracts incorporating the maintenance and repair of all building services equipment and a 24 hour, 365 day breakdown service.



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