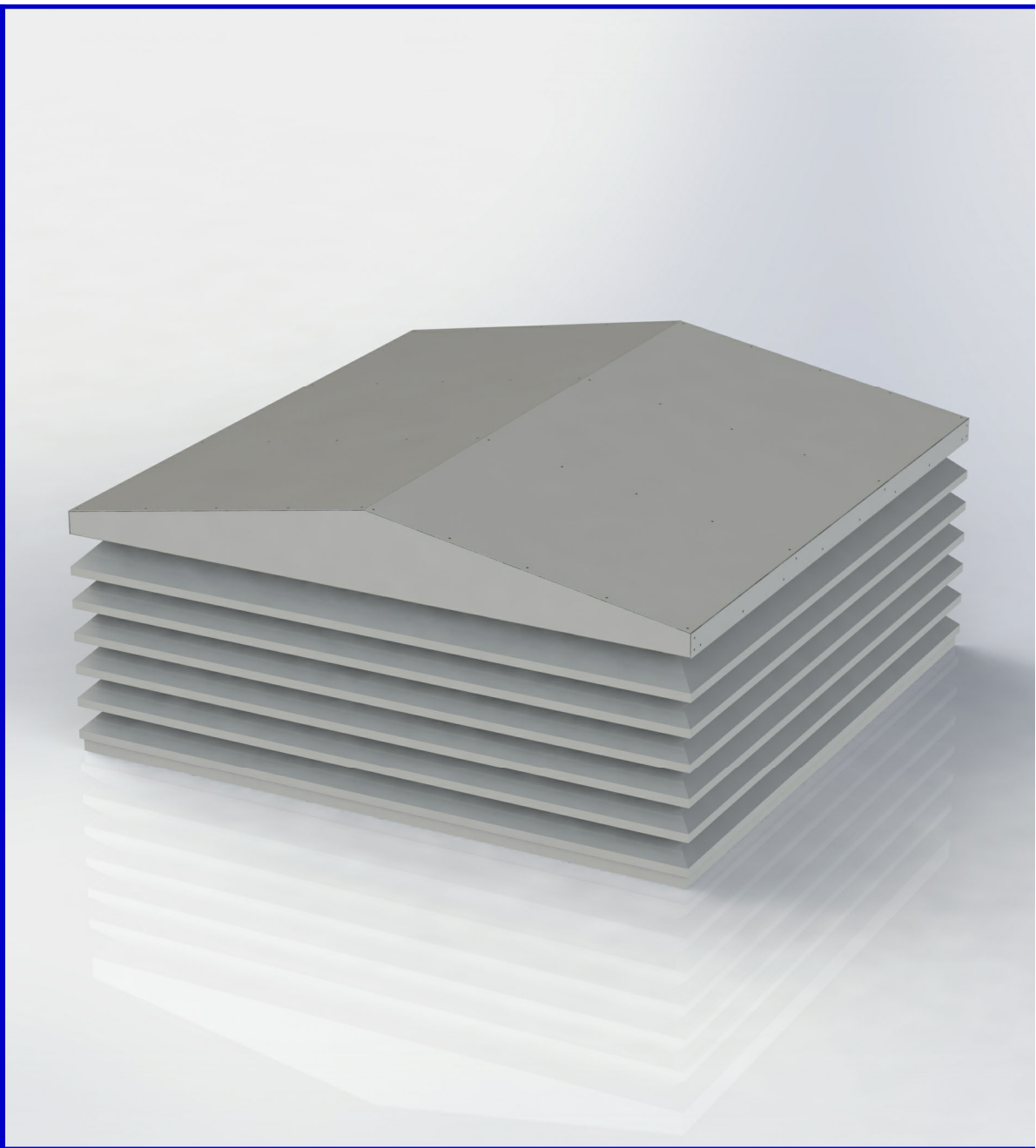
Incorporating

Louvre systems

Series PHL75

Standard penthouse louvres - 75mm pitch

- Roof mounted ventilation terminals, also known as turret louvres
- Single bank of blades, spaced at a 75mm pitch
- Laser cut apex roof as standard
- Suitable for intake and exhaust applications
- Comprehensive range of options to enhance functionality and appearance

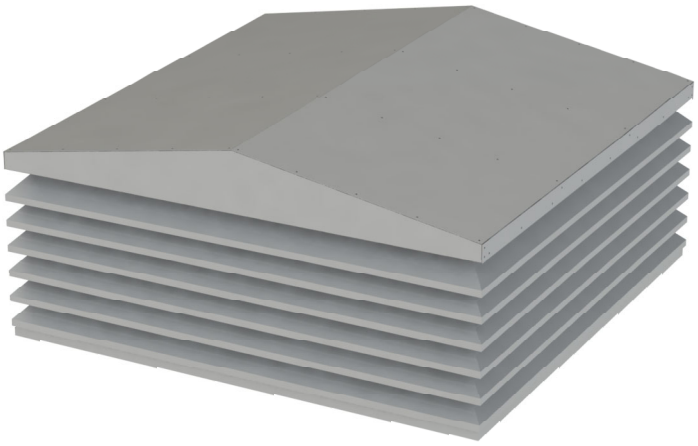


Series PHL75

Series PHL75 penthouse louvres, also known as turret louvres, are roof mounted ventilation terminals, suitable for performing both intake and exhaust functions.

Commonly used in natural ventilation applications, penthouse louvres allow temperature differentials and the force of the wind to be used in place of energy intensive forced ventilation. This can present significant savings of both cost and energy over the life of a building.

HVC Series PHL75 penthouse louvres are manufactured to order and are available with a comprehensive range of options to both functionality and appearance, including integrated volume control dampers and internal dividers.



Design features

Material	Louvre body: Extruded aluminium
	BZP steel screws
	Roof: Laser cut galvanised steel as standard (aluminium or stainless steel optional)
Blade	WL75 type - 75mm pitch with 45° face slope
Frame	Standard: To suit raised curb
	Optional: To suit flat roof
Fixings	None
Finish	Standard: Bare metal
	Optional: See page 10
Free area	Series PHL75 approx 50%

Important note:

Free area is not a reliable guide to performance.

It is possible to have two louvres with identical geometric free areas but different airflow characteristics.

Wherever possible use a tested airflow coefficient, as stated on the following page or available in the test certificate for WL75 louvres which is available on request.

Quality assurance

HVC Supplies (Stourbridge) Ltd is an ISO 9001 certified company.

Assessed to ISO 9001
Cert/Ref No. 1186

BSRIA Testing

Series PHL75 penthouse louvres are derived from Series WL75 standard weather louvres, which have been tested against:

BS EN 13030:2001

The testing was carried out in April 2013 by BSRIA in Bracknell, Berkshire, England.

Copies of the test reports are available on request.

Performance

WL75 louvres were tested with an optional rear mounted drip tray, this will have had negligable impact on airflow but a large impact on rain resistance.

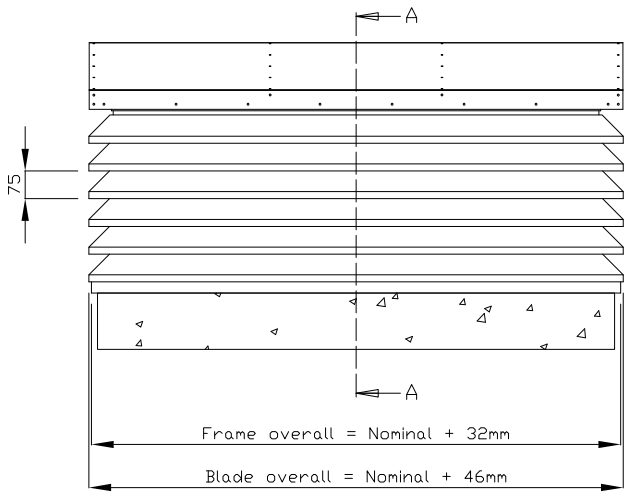
Headline figures are shown here, full copies of the test reports are available on request.

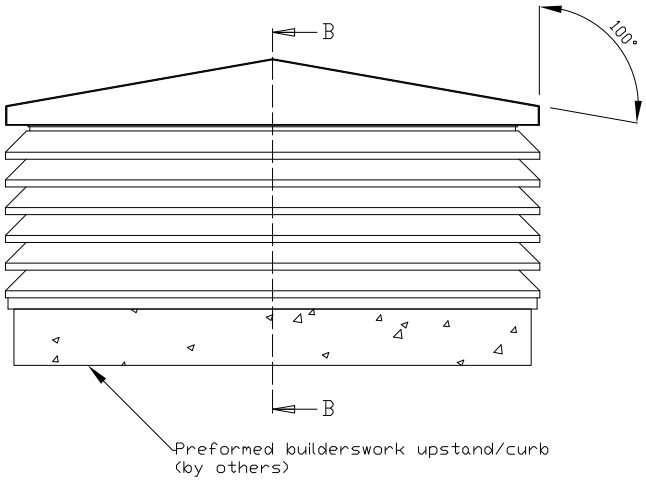
WL75 - DT: (WL75 complete with rear mounted drip tray)

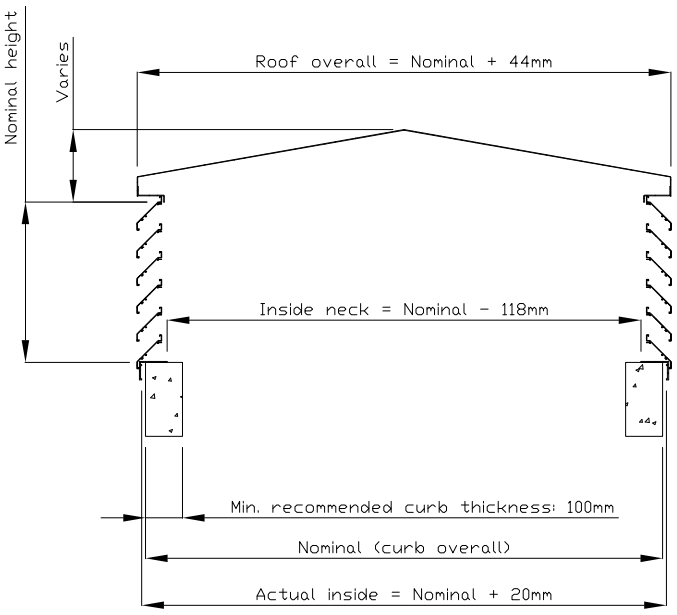
Mean airflow coefficient: 0.252 (Class 3)

Rain rejection: Class C up to approx 1.4 m/s draw velocity
Class D above approx 1.4 m/s draw velocity

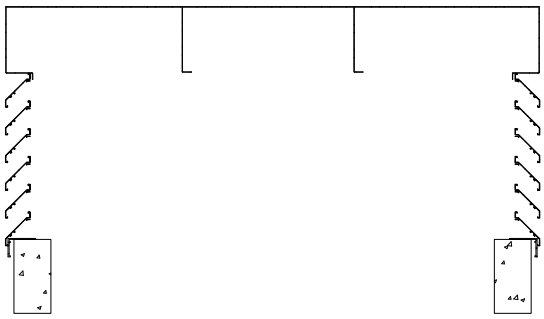
Technical drawings - Single units







SECTION A-A



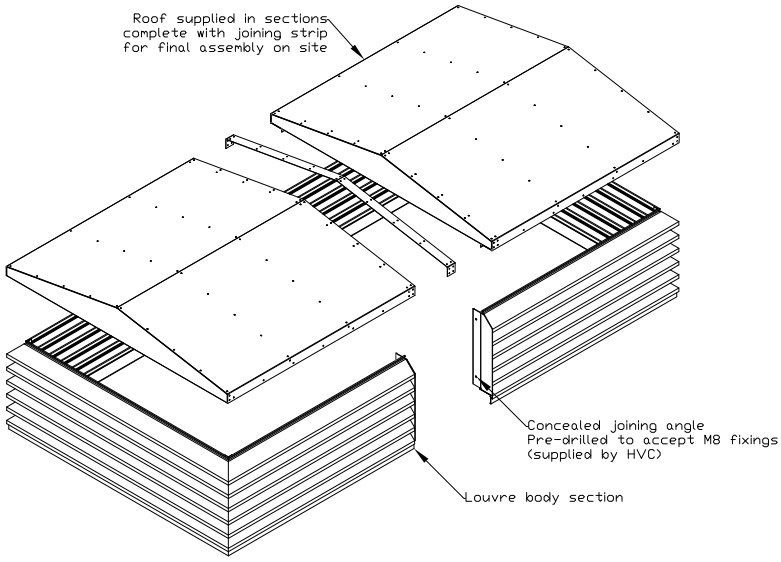
SECTION B-B

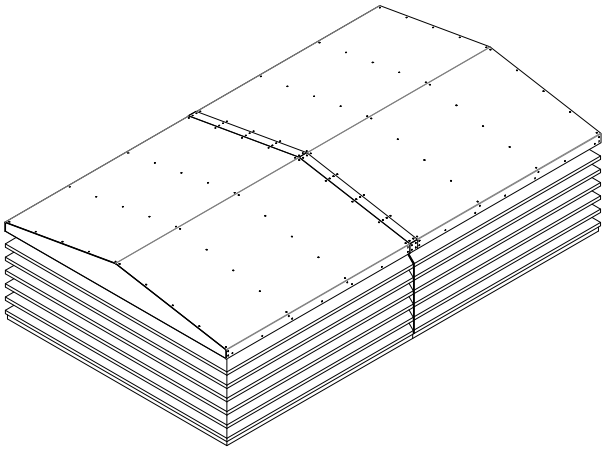
Please note:
As blades are set on a fixed pitch of 75mm, the nominal height of the supplied unit may be slightly different to that ordered.

Technical drawings - Multiple units

Where required either/both penthouse louvre bodies and/or their rooves will be supplied in sections for assembly on site.

If supplied in sections all appropriate fixings will be supplied by HVC for joining the sections.



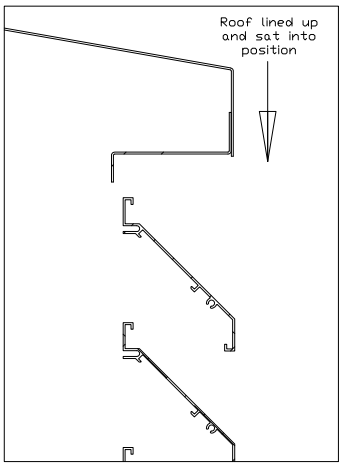


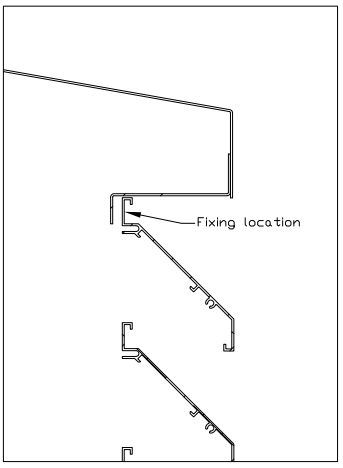
Rooves

Recently redeveloped, penthouse louvre rooves are now manufactured from laser cut galvanised steel sheet as standard, other metals such as stainless steel or aluminium are optional.

Supplied loose and sized to sit inside the top blade ring of the penthouse, fixings should then be used at the location shown to join the roof securely to the louvre body.

Fixings to secure the roof supplied by others - Tek screws recommended at a pitch of not more than 200mm.





Internal insulation

As standard rooves are supplied uninsulated, however can be specified with factory fitted self-adhesive 10mm thick internal insulation, secured with mechanical fixings.

This option has two benefits:

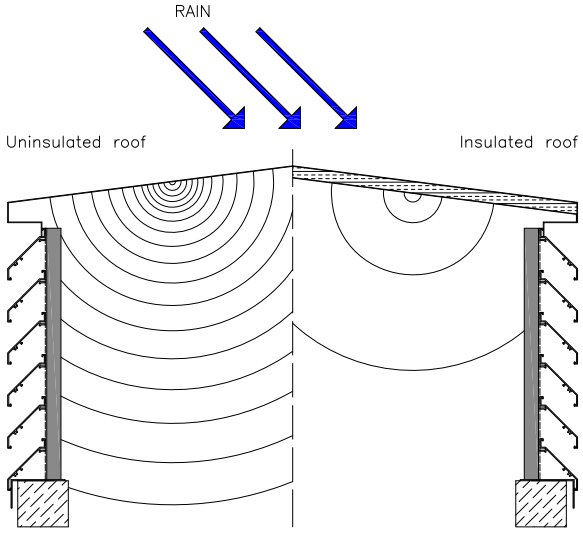
Acoustic insulation

An uninsulated steel roof essentially acts like a drum during rain, meaning occupant comfort could be reduced in below areas during periods of rain.

Condensation prevention

A large steel surface exposed to the elements on one side, and exposed to warm moist air on the other is certain to produce condensation.

Under the right conditions large amounts of water could easily be formed inside the louvre, dripping down into occupied areas and damaging building internals.



Insulation is a closed cell type ensuring minimal absorption of moisture, and is Class O rated when tested against BS 476 pt 6 2000.

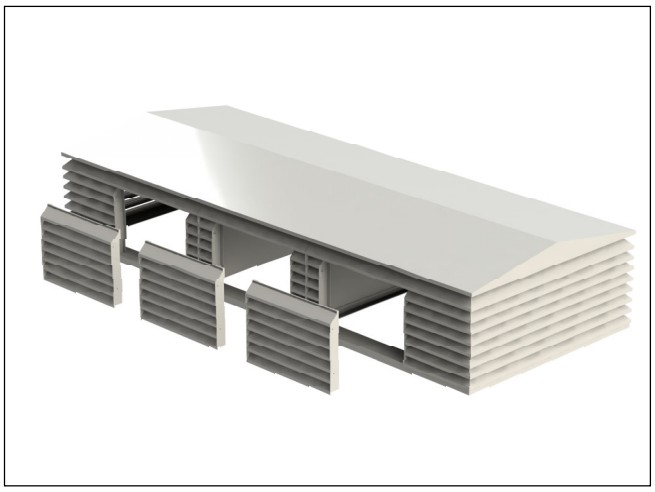
A full specification sheet is available on request.

Further options

Access panels

Removable access panels can be incorporated into penthouse louvres enabling access into the unit, for maintenance of internal volume control dampers, cleaning etc.

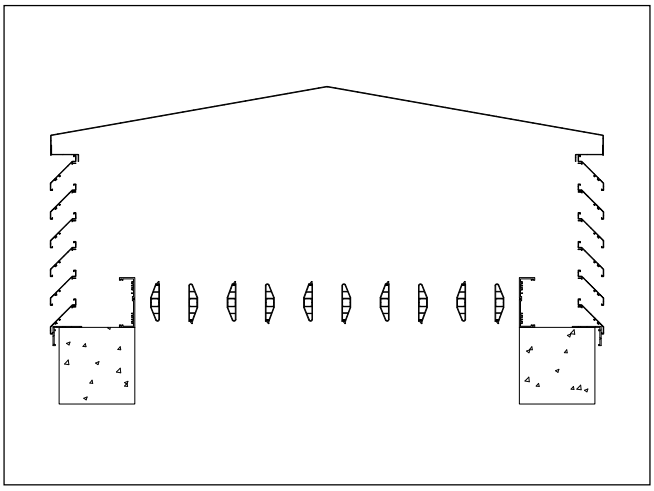
Available as fully removable panels as shown, or as lockable doors.



Internal high performance plastic volume control dampers

For natural ventilation applications, Series LF uPVC VCD high performance plastic VCDs can be supplied sized to suit the inside size of the penthouse louvre.

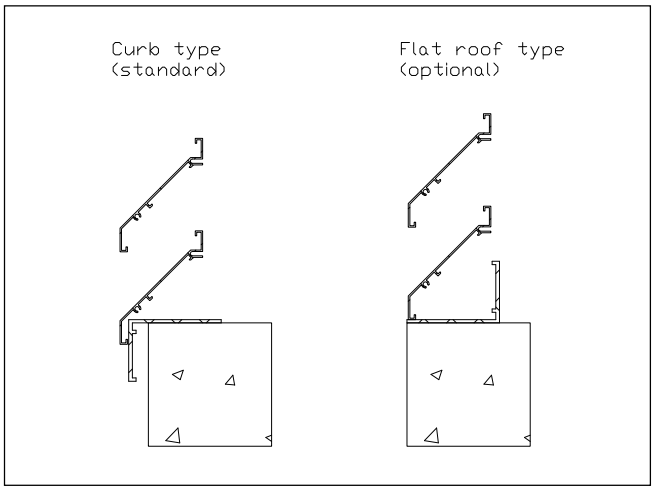
Dampers can either sit directy on top of the curb as shown below, or inside the curb if required.



Flat-roof frame design

As standard penthouse louvres are manufactured with a base to suit a raised curb.

If required a flat-roof type frame can be manufactured where there is no turned out section on the base.



Options

Internal dividers

Internal dividers greatly enhance louvre functionality by creating seperate compartments within a single penthouse louvre.

This allows the natural forces of wind and thermal bouyancy to be taken advantage of, ventilating the building without the use of forced ventilation equipment.

Dividers are manufactured from galvanised steel, and can be insulated if required.

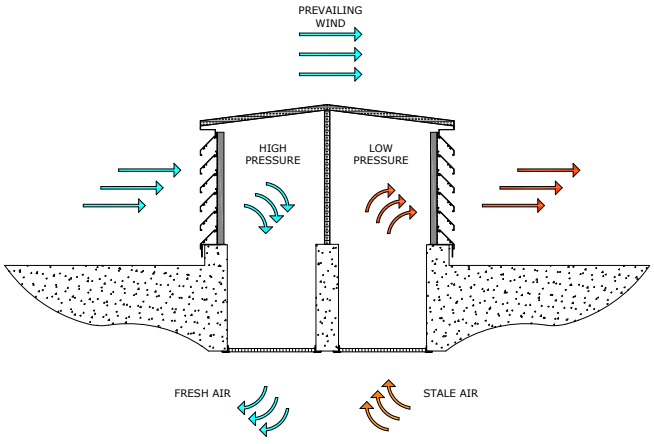
Wind driven

This set up uses wind to force fresh air into one section of the PHL, creating high pressure and forcing air down the ventilation shaft.

The fresh air enters the living space below through a diffuser or grille, creating high pressure within the room.

At the same time, the other side of the penthouse has a lower pressure as the wind blows away from it.

This creates a constant pressure imbalance on each side of the louvre, constantly supplying fresh air and extracting stale air

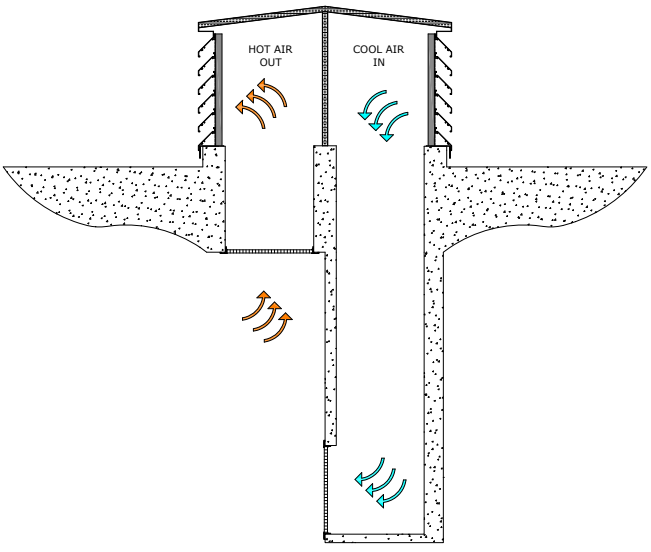


Thermally driven

This relies on warmth created by the sun and/or occupants to drive the airflow.

The natural bouyancy of warm air inside a room causes it to rise to the ceiling, and a strategically placed grille allows it to rise through a ventilation shaft and out of one side of the penthouse louvre.

The other side of the louvre will then allow cool fresh air to be pulled in due to the pressure differential created when the warm air escaped.



Notes

Finish

Mill aluminium blades and frame, galvanised steel roof (standard)

Polyester powder coating to any RAL or BS colour

Ordering codes

Example

1	**-**	**1000 x 1000**	**-**	**PHL75**	**-**	**CURB**	**-**	**DSR-INS**	**-**	**BM**	**-**	**RAL9006**

Codes

1)	**Quantity**		
2)	**Size (mm)**	(Width x height)	*Taken to be curb overall size as standard*
3)	**Series**	PHL75	Penthouse louvre - 75mm pitch blades
4)	**Frame design**	*(nothing)* FLAT	To suit a raised curb (standard) To suit a flat roof
5)	**Debris screens**	BM IM VM	Bird mesh (12.7mm x 12.7mm weave, galvanised steel) Insect mesh (1.6mm x 1.6mm weave, G304 stainless steel) Vermin mesh (6mm x 6mm weave, G304 stainless steel)
6)	**Roof type**	*(nothing)* DSR-INS	Uninsulated galvanised steel apex roof (standard) Insulated galvanised steel apex roof
7)	**Finish**	Mill RAL... BS...	Mill aluminium blades, galvanised steel roof (standard) Polyester powder coated to RAL... Polyester powder coated to BS....

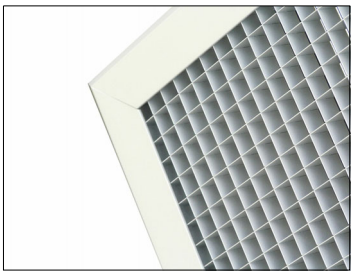
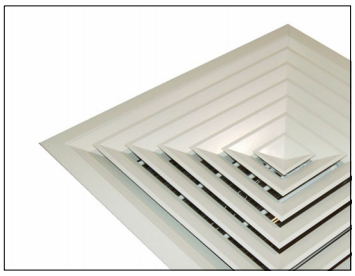
Options like removable panels, internal dividers and internally mounted volume control dampers do not have ordering codes.
Any requirements for these options should be discussed directly with HVC.

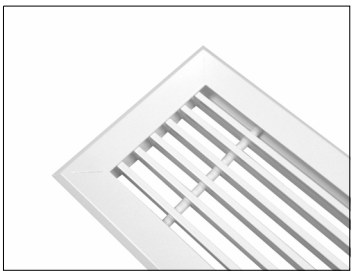
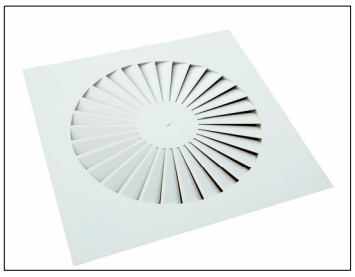
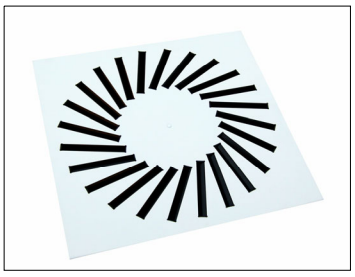
HVC & NCA products

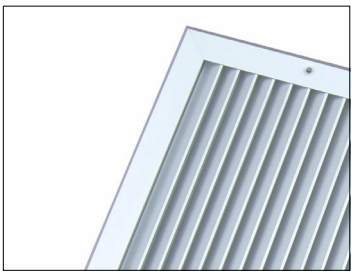
HVC offer the significant advantage of manufacturing both in duct and duct terminal equipment, making us a one stop shop for all your HVAC needs.

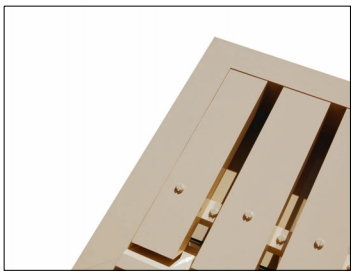
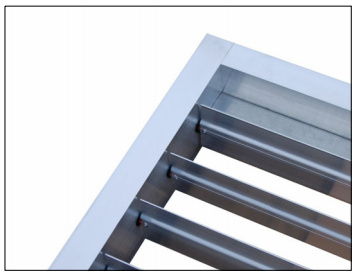
The products shown below are a selection, not an exhaustive list. Go to **www.h-v-c.com** for details on all HVC and NCA products.

HVC: Grilles, Diffusers, Louvres and Volume Control Dampers

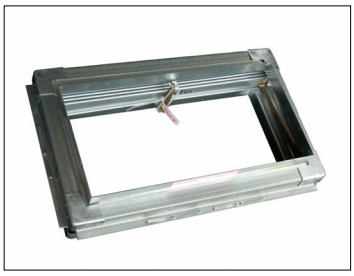





NCA: Fire and Volume Control Dampers



HVC Supplies (Stourbridge) Ltd
Jason House
Amblecote
West Midlands
DY8 4EY
United Kingdom

Tel: +44 (0)1384 376555
Fax: +44 (0)1384 392555

sales@h-v-c.com

www.h-v-c.com

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Cert/Ref No. 1186