



CI/SfB Classification

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Coltite

Natural glass louvred ventilator



Front Cover:
Denmark Radio, Copenhagen
Architect: Dissing & Weitling, Copenhagen
For each unit, the three upper louvres are controlled by one actuator for natural ventilation.
The remaining six louvres are controlled automatically for replacement air in a fire situation.

INTRODUCTION

Colt-lite is a natural glass louvred ventilator for installation into the façade for both day to day and smoke ventilation.

It is available in a wide range of sizes, louvre options and control options. Its form and function make it particularly suited to naturally ventilated buildings where good aerodynamic and measured free area ventilation is required while achieving high acoustic, thermal and aerodynamic performance.

Whilst it is primarily designed as a glazed element of the building envelope, Colt-lite can also be applied as a high specification smoke and air control damper. Typical applications are hospitals, schools, apartments and commercial buildings.

Colt-lite louvred ventilators are popular with Specifiers and Contractors because of the wide range of options available, as well as with Building Operators and Owners because of their simplicity and low maintenance.

Natural ventilation is an energy-efficient means of reducing the effects of excessive temperatures. Fresh air can be introduced at low level, whilst hot air can be exhausted through the ventilator at high level.



Goldsmiths College, London. Type LWT





Rolex SA, Geneva. Type LWS

FEATURES & BENEFITS

Wide range of applications – Coltlite is designed as a dual purpose ventilator, providing both day to day and smoke ventilation. The units can be supplied in either non thermally or thermally broken frames with single or double glazed assemblies. There are pneumatic, electric or hand controls and a wide range of frame types, louvre types and finishes. Coltlite's versatility allows it to be installed either as a primary or secondary facade element, such as in a winter garden. It is available either single, double or triple breasted.

High performance – Coltlite is aerodynamically efficient, has a low U value, is exceptionally airtight and has a high resistance to weather. Its free area is approximately 3 times that of a bottom hung ventilator of a similar size. For further details, see pages 6 & 7.

Proven performance – For smoke ventilation, the majority of Coltlite ventilators have been tested in accordance with EN 12101-2 in accredited third test laboratories and are CE marked. This means that they are classed as and may be used as smoke and heat exhaust ventilators.

Discreet appearance – Coltlite only projects a small way into the surrounding space. It has a narrow perimeter frame which can be easily integrated into glazing systems or into solid structures. One version can accommodate a hidden actuator.

Easy to install – Coltlite is delivered fully assembled to site. It has a wide range of adaptor profiles to suit its vertical installation into curtain walling, glazing or prepared openings.

Efficient operation – When Coltlite ventilators are connected to a building management system, they can operate automatically without any human intervention. Coltlite ventilators can be integrated into wind, rain and temperature sensors. A single actuator is capable of operating a large number of louvres on its own thereby reducing wiring costs. It is possible to modulate the louvre positions to any intermediate angle between the fully open and fully closed positions.



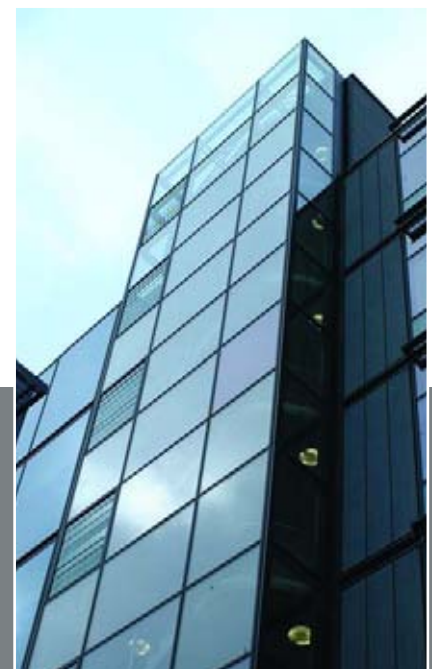
Safe in operation – Coltlite has an anti-finger trapping facility.

Durable – Coltlite is manufactured from extruded aluminium frames and precision engineered aluminium pivots.

Quality in manufacture – Each Coltlite unit is given a functional test before despatch.

Low in maintenance – Coltlite units are very low in maintenance requirements.

Design service – Colt provides a comprehensive design service.





Main image Frewen Library, Portsmouth. Type LWT
Bottom left Landhaus BK, Austria. Type LWT
Bottom right Sandwell Hospital, Birmingham. Type LWT





Royal Society, London. Type LWS

OPTIONS

Louvres

Glass louvres are manufactured as standard in single and double glazed options. There is the choice of glass with a thickness of between 4 - 8 mm for the double glazed systems, with an overall glass thickness of 32mm, and glass with a thickness of between 8, 10 and 12 mm for the single glazed version. The LWST version is also available with double glazed louvres that sit completely flush with the facade. Louvres can also be provided with insulated aluminium sections.

For all versions except LWS, glazing seals comprise double weather strips with a nylon lip between, and the horizontal glass edges of the louvres are enclosed with aluminium sections which have two overlapping weather seals for excellent air tightness.



Frames

Outer and louvre frames are available either thermally or non- thermally broken.

Controls

Coltlite is available with pneumatic, manual, 230v ac or 24v dc electric controls for the potential to be connected to a building management system.

With the electric version, Coltlite moves noiselessly to any position, automatically stopping at the fully open and fully closed positions. Alternatively, blades can be stopped in any intermediate position throughout the duration of the open/close cycle. Coltlite has an optional anti-finger trapping facility.

The LWI version has hidden controls.

Manual controls options

Hand controls include lever handle or crank handle with window winder.

Paint finishes

Coltlite is available mill finish, anodised or polyester powder coated to a RAL colour. Thermally broken frames can be coated to different colours inside and out.



No.1 Centaur St, London. Type LWS



Crank handle



Lever



Motorised control

Technical Information Summary

Type	LWN FRAMED	LWT28 FRAMED	LWT32 FRAMED
Frame type	Non thermally broken outer frame, non thermally broken louvre frame	Thermally broken outer frame and louvre frame thickness	Thermally broken outer frame and louvre frame
Width (1), from	250 - 1800mm	250 - 1800mm	250 - 1800mm
Height (2), from	200mm, up to any height	200mm, up to any height	200mm, up to any height
Min. Louvre size	150mm x 110mm	150mm x 110mm	150mm x 110mm
Max. Louvre size	1700mm x 350mm	1700mm x 350mm	1700mm x 350mm
Frame depth	46mm	46mm	46mm
Aerodynamic performance Cv	0.55	0.56	0.56
Air permeability at 50 Pa	7.22 m ³ /h/m ² 1.2 m ³ /h/m <small>(Class 3 to EN 12207)</small>	3.23 m ³ /h/m ² 0.53 m ³ /h/m <small>(Class 3)</small>	5.09 m ³ /h/m ² 0.85 m ³ /h/m <small>(Class 3)</small>
Watertightness	Watertight up to 150 Pa <small>(Class 4a to EN 12208)</small>	Watertight up to 150 Pa <small>(Class 4a)</small>	Watertight up to 150 Pa <small>(Class 4a)</small>
U value	2.8 W/m ² /K	2.3 W/m ² /K	2.3 W/m ² /K
Blade pitch (3)	variable	variable	variable
Louvre opening angle (4)	84° / 75°	84° / 75°	84° / 75°

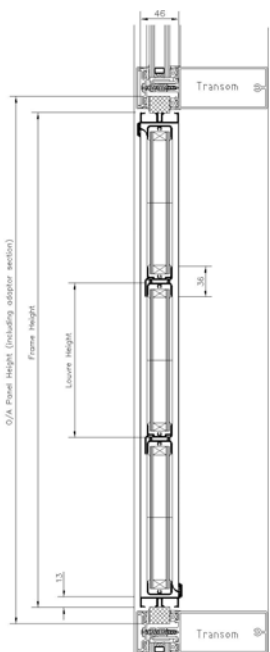
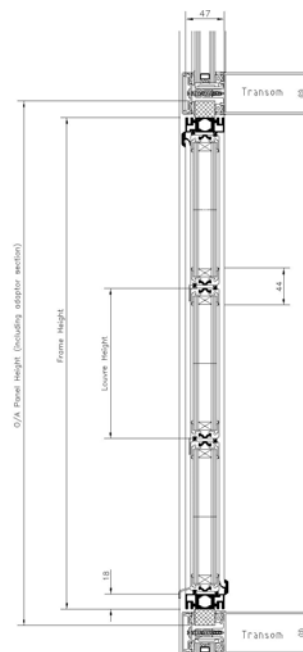
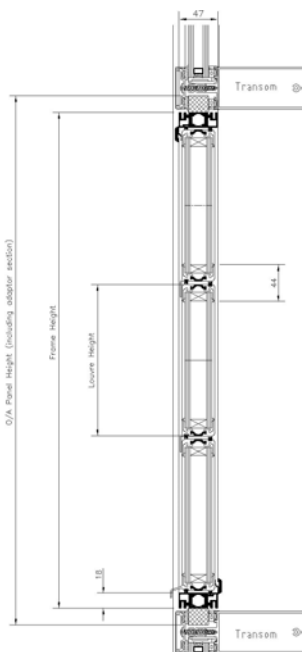




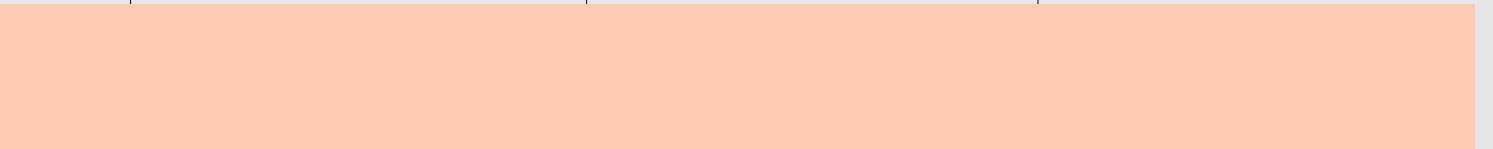
LWS 45 CHAMFERED	LWS OVERLAPPING	LWST FLUSH FRAMED	LWI HIDDEN CONTROLS
Thermally broken outer frame, frameless chamfered louvres	Non thermally broken outer frame, frameless overlapping louvres	Double glazed panel, 30mm overall glass panel thickness	Double glazed panel, 28mm overall glass panel
250 - 1600mm	250 - 1600mm	250 - 1600mm	250 - 1800mm
200mm, up to any height	200mm, up to any height	200mm, up to any height	520mm, up to any height
150mm x 110mm	150mm x 110mm	150mm x 110mm	150mm x 110mm
1500mm x 300mm	1500mm x 350mm	1500mm x 350mm	1700mm x 350mm
46mm	46mm	48mm	46mm
0.55	0.55	tbc	0.56
10.59 m ³ /h/m ² (Class 2) 2.03 m ³ /h/m	10.46 m ³ /h/m ² (Class 2) 1.76 m ³ /h/m	7.5 m ³ /h/m ² (Class 3) 1.5 m ³ /h/m	3.23 m ³ /h/m ² (Class 3) 0.53 m ³ /h/m
Watertight up to 0 Pa (Class 1a)	Watertight up to 100 Pa (Class 3a)	Watertight up to 100 Pa (Class 3a)	Watertight up to 100 Pa (Class 3a)
5.8 W/m ² /K	5.8 W/m ² /K	2.3 W/m ² /K	2.3 W/m ² /K
variable	variable	non variable	variable
84° / 75°	84° / 75°	84° / 75°	84° / 75°

- (1) Outside frame dimensions. For throat dimensions subtract 100mm.
- (2) Aspect ratio of louvre height to louvre length must be less than 1:10.
- (3) For all systems the standard is 50/50 (one half of the louvre blade is inside and the other half is outside). A range from 1/3 inside or outside to 2/3 inside or outside can be provided.
- (4) Louvre opening angle (with motor/handle).

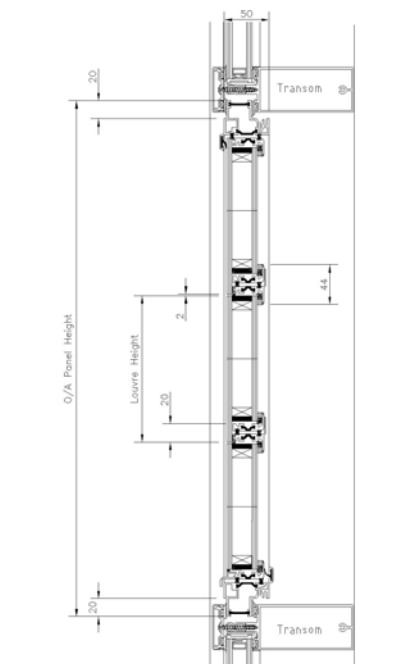
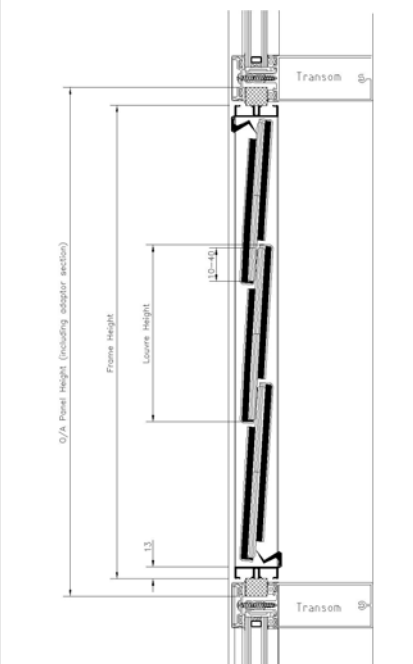
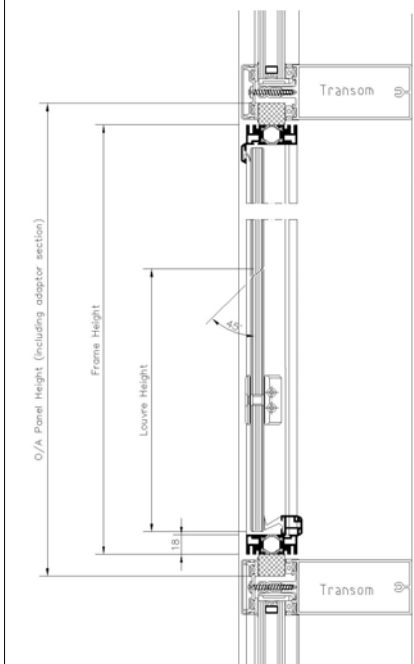
This data is indicative only. Colt can guarantee the structural stability for a bank of windows with an area up to 5m² assuming a design wind load of 1500 Pa. Above this, a structural engineering calculation will be required. Units up to 15m high may be supplied to a special order subject to technical approval by Colt.

COLTLITE LWN VENTILATOR	COLTLITE LWT 28 VENTILATOR	COLTLITE LWT32 VENTILATOR
<p>Product Reference Coltlite LWN Glass Louvred Ventilator.</p>	<p>Product Reference Coltlite LWT 28 Glass Louvred Ventilator.</p>	<p>Product Reference Coltlite LWT32 Glass Louvred Ventilator.</p>
<p>Description Non thermally broken extruded aluminium (46mm thick) outer frame with framed double glazed glass louvres into non thermally broken frames.</p>	<p>Description Extruded aluminium outer frame with framed controllable double glazed louvres with thermal breaks to both outer and internal sections.</p>	<p>Description Extruded aluminium outer frame with framed controllable double glazed louvres with thermal breaks to both outer and internal sections.</p>
<p>Glass and Louvre Type 24mm overall clear toughened, float or laminated glass thickness. Visible width of horizontal louvre frame 37mm when looking from the outside. Or 24mm overall insulated metal skinned panel infill.</p>	<p>Glass and Louvre Type 28mm overall clear toughened, float or laminated glass thickness. Visible width of horizontal louvre frame 44mm when looking from the outside. Alternatively 28mm overall insulated metal skinned panel infill.</p>	<p>Glass and Louvre Type 32mm overall clear toughened, float or laminated glass thickness. Visible width of horizontal louvre frame 44mm when looking from the outside. Or 32mm overall insulated metal skinned panel infill.</p>
<p>Control Options</p> <ul style="list-style-type: none"> ■ Hand - Lever or crank handle operation. ■ Motorised - Frame mounted motor (hidden behind side frame profile) to be positioned at top or bottom on either side frame with a 230 volt AC or 24 volt DC motor and with a typical operation time to be 15-30 seconds. 		
<p>Decorative Finish</p> <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) ■ Natural (Silver) anodised finish AA20 	<p>Decorative Finish</p> <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) with option for inner and outer sections being different colours ■ Natural (Silver) anodised finish AA20 	<p>Decorative Finish</p> <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) with option for inner and outer sections being different colours ■ Natural (Silver) anodised finish AA20
<p>Technical Data</p> <ul style="list-style-type: none"> ■ Thermal performance 2.8 W/m²/K ■ Aerodynamic coefficient (Cv): 0.55 ■ Air permeability 7.22m³/h/m² @ 50Pa 1.2m³/h/m of seal ■ Watertight at 150Pa ■ Maximum acoustic rating to 33dB (Rw) 	<p>Technical Data</p> <ul style="list-style-type: none"> ■ Thermal performance 2.3 W/m²/K ■ Aerodynamic coefficient (Cv): 0.56 ■ Air permeability 3.23m³/h/m² @ 50Pa 0.53m³/h/m of seal ■ Watertight at 150Pa ■ Maximum acoustic rating to 38dB (Rw) 	<p>Technical Data</p> <ul style="list-style-type: none"> ■ Thermal performance 2.3 W/m²/K ■ Aerodynamic coefficient (Cv): 0.56 ■ Air permeability 5.09m³/h/m² @ 50Pa 0.85m³/h/m of seal ■ Watertight at 150Pa ■ Maximum acoustic rating to 38dB (Rw)
		

COLTLITE LWS 45 CHAMFERED GLASS VENTILATOR	COLTLITE LWS OVERLAPPING VENTILATOR	COLTLITE LWST VENTILATOR
Product Reference Coltlite LWS45 Glass Louvred Ventilator.	Product Reference Coltlite LWS Glass Louvred Overlapping Ventilator.	Product Reference Coltlite LWST Glass Louvred Ventilator.
Description Thermally broken extruded aluminium (46mm thick) outer frame with frameless controllable (single glazed) glass louvres.	Description Thermally broken extruded aluminium (46mm thick) outer frame with frameless controllable (single glazed) overlapping glass louvres.	Description Extruded aluminium outer frame 47mm deep, with flush framed controllable double glazed louvres with thermal breaks to both outer and internal sections.
Glass and Louvre Type 8mm / 10mm / 12mm overall clear toughened glass with bevelled edge (chamfered) blades.	Glass and Louvre Type 8mm / 10mm 12mm overall clear toughened, float or laminated glass with overlapping blades.	Glass and Louvre Type 34mm overall clear toughened double glazed unit with flush external glass. Horizontal louvre frame not visible from the exterior when closed.



Decorative Finish <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) ■ Natural (Silver) anodised 	Decorative Finish <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) ■ Natural (Silver) anodised finish AA20 	Decorative Finish <ul style="list-style-type: none"> ■ Polyester powder paint (RAL colour) with inner and outer sections being different colours ■ Natural (Silver) anodised AA20
Technical Data <ul style="list-style-type: none"> ■ Thermal performance with 10mm glass installed - 6W/m²K ■ Aerodynamic coefficient (Cv): 0.66 when fully open ■ Air permeability 10.59m³/h/m² @ 50Pa 2.03m³/h/m of seal ■ Watertight to 0Pa 	Technical Data <ul style="list-style-type: none"> ■ Thermal performance with 10mm glass installed - 6W/m²K ■ Aerodynamic coefficient (Cv): 0.66 when fully open ■ Air permeability 10.46m³/h/m² @ 50Pa 1.76m³/h/m of seal ■ Watertight to 100Pa 	Technical Data <ul style="list-style-type: none"> ■ Thermal performance 2.3 W/m²/K ■ Aerodynamic coefficient (Cv): 0.55 when fully open ■ Air permeability 7.22m³/h/m² @ 50Pa 1.2m³/h/m of seal ■ Watertight at 150Pa ■ Maximum acoustic rating to 38dB (Rw)



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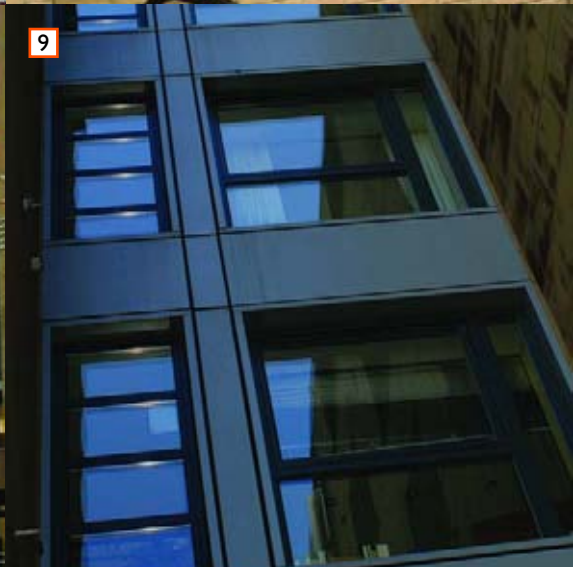
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14



15



16

- 1 Mickle Over Library, Derby. Type LWT
- 2 Northants School For Boys, Northants. Type LWT
- 3 Frewen Library, Portsmouth. Type LWT
- 4 Wembley Stadium, London. Type LWS
- 5 City Hall, Innsbruck, Austria. Type LWS
- 6 Ventilated facade. Type LWS
- 7 City Lit, London. Type LWT
- 8 Mossbourne Academy, London. Type LWS
- 9 Annandale St, Edinburgh. Type LWT
- 10 University of Hertfordshire, Hatfield. Type LWS
- 11 City Hall, Innsbruck, Austria. Type LWS
- 12 Cork County Hall, Ireland. Type LWT
- 13 Goldsmiths College, London. Type LWT
- 14 Manchester Civil Justice Centre, Manchester. Type LWT
- 15 O-Dorf IBK, Austria. Type LWS
- 16 School, Seymaz, Geneva. Type LWST



REASONS TO CHOOSE COLT

We offer the highest quality design service covering natural and smoke ventilation, air conditioning and solar shading.

Colt's in-house R&D capability ensures the Colt systems are designed, tested and kept up to date meet or exceed relevant legislations and standards.

We manufacture, install, commission and service - providing you with complete peace of mind.

COLT SERVICE

Part of the Colt Group of companies, Colt Service offers a comprehensive range of maintenance packages incorporating the maintenance and repair of all building services equipment including non Colt products.

Maintenance of a ventilation system is essential. Regular maintenance protects your investment and brings peace of mind that the system will operate effectively in an emergency, where the system is used for smoke control.

Colt Service provides a 24 hour, 365 day emergency cover as standard.

The British Standard BS 5588-12 recommends that smoke control systems should be serviced at least once a year and tested weekly.



"People feel better in Colt conditions"



Architectural Solutions

Climate Control

Smoke Control

Service and Maintenance

Colt International Limited

New Lane Havant

Hampshire PO9 2LY

Tel +44(0)23 9245 1111

Fax +44(0)23 9245 4220

info@coltgroup.com

www.coltgroup.com