

## WCO

### Louvred Natural Ventilator

The WCO (Weathered Clear Opening) ventilator encompasses the benefits of smoke control and day-to-day ventilation in all weather conditions. With two controllable side dampers, air is free to escape even when the top louvres are closed, without letting in rain.

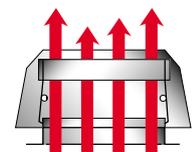
The WCO has an excellent aerodynamic efficiency for a louvred natural ventilator and is available in a variety of sizes, control options and finishes to suit industrial and commercial applications.

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

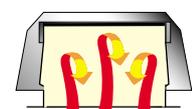


### Benefits & Features

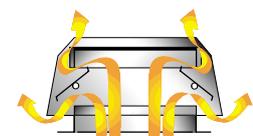
- *Comfortable working conditions for personnel.*
- *“Dual purpose” day-to-day ventilation in all weather conditions and smoke control ventilation*
- *Automatic control (computersied control with OPV - **ONE PER VENT™** option).*
- *Natural daylight (even in closed position with translucent louvres)*
- *Durable and reliable with low maintenance needs.*



**Dry Weather**



**Cold Weather**



**Wet Weather**



## General Description

The WCO is a lightweight natural extract ventilator available in a variety of configurations to suit your particular project requirements and can be used for the following purposes; day-to-day ventilation in all weather conditions, smoke control and to allow the provision of daylighting.

The material used for manufacture is 100% Recycled Grade, Cold Rolled, Mill Finish Aluminium to 3005 H14.

## Dimensions

Three standard options are available:

- 12* . . 1000mm throat width
- 15* . . 1300mm throat width
- 18* . . 1600mm throat width

Each version has ten length options from 1170mm to 3298mm.

† Flange dimensions given are for installation onto prepared curbs.

## Controls

You can choose from four control options:

- Electric Linear Actuator with OPV Controls
- Cable control
- Pneumatic control
- Electric control driven by 24V or 220V electro servo motor

## OPV

Colt recommends consideration of the OPV (**ONE PER VENT™**) control option for all WCO applications.

Using micro-processor technology, OPV is a radical new approach to the control of natural ventilators.

## Base Options

You can choose from five standard base types:

- N1* - for fixing into glazing
- N2* - for fixing under profiled roof
- N3* - for fixing onto profiled roof
- N4* - for fixing onto a flat roof
- N5* - for fixing onto an upstand

## Louvres

The top louvres are available in four different versions:

- A1* - Single skin aluminium,
- A2* - Double skin aluminium,
- T2PC* - Double skinned transparent polycarbonate and
- T1GL* - Single glazed wired glass louvre (up to length . **.29**).

## Louvre Seals

The WCO can be fitted with optional lowloss louvres which incorporate a weatherseal to reduce heat loss when closed.

## Controllable Side Dampers

If the louvres are closed due to bad weather conditions, permanent ventilation is still obtained via two inner side dampers.

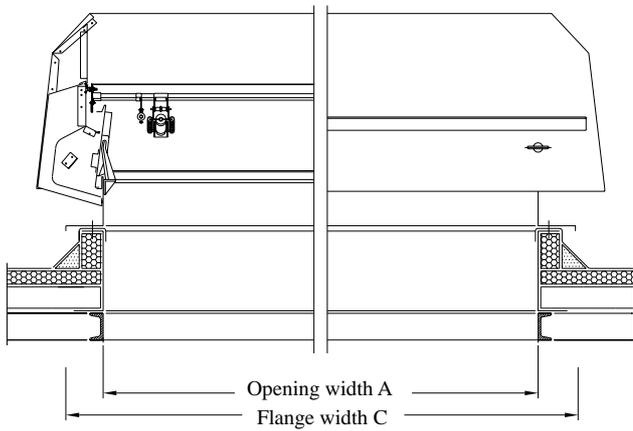
Two standard sizes are available:

- 200 mm* high side dampers
- 400 mm* high side dampers

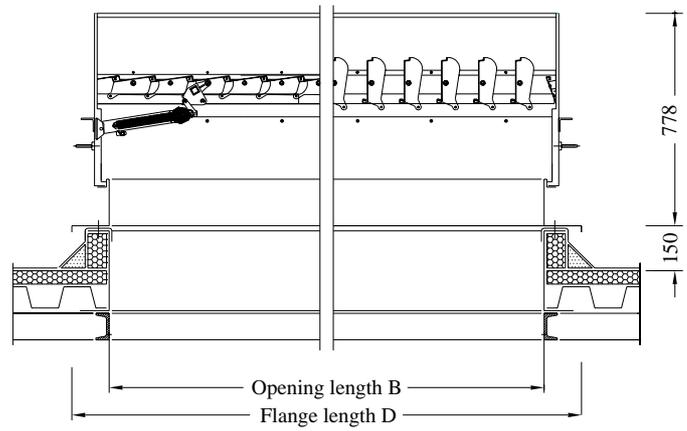
## Guards

Guards can be factory fitted inside the throat of the ventilator at your instruction:

Bird / Insect / Security / Burglar.



**Transverse Cross Section**



**Longitudinal Cross Section**

Type	Dimensions				Louvres	Weight (kg)		
	Opening Width	Opening Length	Flange Width†	Flange Length†	No.	WCO/NL/...../ *		
	A	B	C	D		A1	A2	T2PC
1215	1000	1170	1250	1420	9	55	63	65
1218	1000	1436	1250	1686	11	58	66	68
1221	1000	1702	1250	1952	13	60	68	70
1223	1000	1968	1250	2218	15	66	74	75
1225	1000	2101	1250	2351	16	67	75	77
1226	1000	2234	1250	2484	17	68	76	78
1227	1000	2367	1250	2617	18	69	77	79
1229	1000	2500	1250	2750	19	70	78	80
1232	1000	2899	1250	3149	22	74	82	84
1236	1000	3298	1250	3548	25	78	86	88
1515	1300	1170	1550	1420	9	58	67	70
1518	1300	1436	1550	1686	11	63	72	75
1521	1300	1702	1550	1952	13	65	74	77
1523	1300	1968	1550	2218	15	71	80	83
1525	1300	2101	1550	2351	16	72	81	84
1526	1300	2234	1550	2484	17	73	82	85
1527	1300	2367	1550	2617	18	75	84	87
1529	1300	2500	1550	2750	19	78	87	90
1532	1300	2899	1550	3149	22	82	91	94
1536	1300	3298	1550	3548	25	90	99	102
1815	1600	1170	1850	1420	9	66	78	81
1818	1600	1436	1850	1686	11	72	84	87
1821	1600	1702	1850	1952	13	78	90	93
1823	1600	1968	1850	2218	15	84	96	97
1825	1600	2101	1850	2351	16	86	98	101
1826	1600	2234	1850	2484	17	88	100	103
1827	1600	2367	1850	2617	18	90	102	105
1829	1600	2500	1850	2750	19	92	104	107
1832	1600	2899	1850	3149	22	98	110	113
1836	1600	3298	1850	3548	25	109	121	124

\*A1 Single Skin Aluminium Louvre Blades    A2 Double Skin Aluminium Louvre Blades  
 T2PC Twin Wall Polycarbonate Louvre Blades

## Environmental Control

The WCO ventilator is the effective solution to the problem of removing unpleasant and unwanted warm air from industrial and commercial buildings

## Smoke Control

The WCO is an effective smoke ventilator. As part of your buildings smoke control system, WCO ventilators will protect the building structure, occupants and contents from the worst effects of heat and smoke.

The WCO is equipped with a fusible link, which on reaching a designated temperature (72°C, 93°C, 141°C), will automatically open the louvres.

## Maintenance

The WCO has low maintenance needs - only periodic removal of debris is recommended to maintain weather performance plus a simple annual service.

When installed as part of a smoke control system, the WCO should be serviced at least once a year and tested weekly, as recommended by BS 7346.

## Colt Service Ltd

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 and providing 24 hour, 365 day emergency cover.



## Installation

The WCO can be fixed to all roof structures including upstand, corrugated sheeting, glazing or mounted on framing and can be easily integrated with other Colt systems such as Cosmotron rooflighting. The WCO can be installed longitudinal from 0° to 45° and to a maximum of 3° on the lateral axis.

## Finishes

The WCO is available with the option of a Stoved Polyester Powder Paint Finish applied to the principal body components.



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