

# OHL-100WT – Weather Trap Louvers

## Model: OHL-100WT

The Holyoake OHL-100WT louver is a maximum performance “Two Stage” louver system with Class A weatherability performance. This system incorporates the external use of the KD-100 louver profile in combination with a horizontal second stage louver bank to the rear. The combination of these two profiles ensures that, under all but the most extreme atmospheric conditions, water ingress through the system would effectively be eliminated.

The large profile and 100mm blade spacing of the OHL100WT creates a bold line across the louver face which is architecturally pleasing. The slightly curved blade face enhances the architectural appeal of the louver. The use of the KD-100 section on the external face also allows for the OHL-100WT to maintain a continuous appearance across the face even when some openings might require the use of a two stage louver.

The OHL-100WT louver can be installed as part of the Mechanical Services System for either intake or exhaust applications.

The OHL-100WT can be manufactured in either panel or knockdown form. The knockdown format uses the Holyoake “Concealed Mullion” system, which is stick built on site and once installed, creates an unbroken line across the louver face in both width and height. (subject to the installation of suitable supporting steelwork) The secondary louver at the rear is manufactured in panels, which are independently fixed to the rear of the installed first stage louvers.

The OHL-100WT is available with a choice of two standard frame sections. The first being a 45mm flanged frame profile, with a second option being the 25mm channel section.

All of the louver components, including the rear posts and blade support clips, are fabricated from extruded aluminium, which eliminates any potential issues with dissimilar metals within the system.

### Standard Construction

<b>Frame:</b>	6063 T5 extruded aluminium, square cut corners, fixed with #10 screws for rigidity.
<b>Outer Blades:</b>	6063 T5 extruded aluminium with double weather stop.
<b>Inner Blades:</b>	6063 T5 extruded aluminium.
<b>Mesh:</b>	Bird mesh or insect screen.
<b>Finish:</b>	Powder Coat Finish.

### Features

- Two stage louver for maximum weathering performance.
- Architectural front blades.

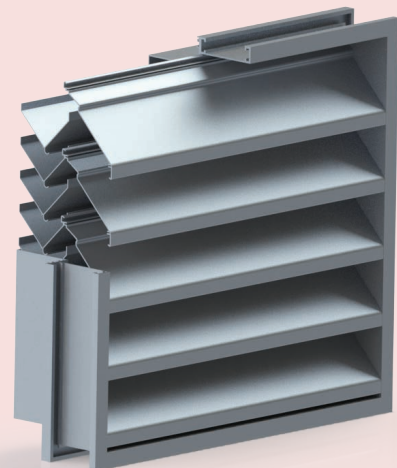
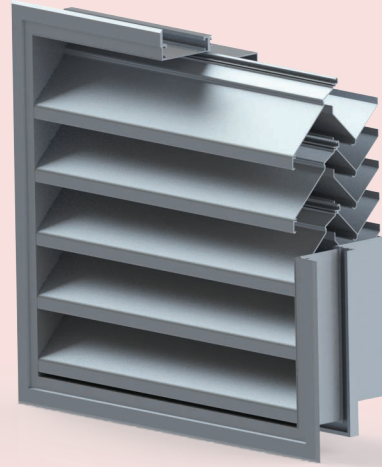
### Options

- A range of Powder Coat colours.

### Note

When velocities through louvers cannot be controlled, water penetration performance cannot be guaranteed.

## Weather Trap Louver



## Selection

The velocity of the air flow through a louver's effective pressure area must be identified. This establishes if the louver size selected will minimise water penetration (due to weather) and determines a pressure drop due to the air flow.

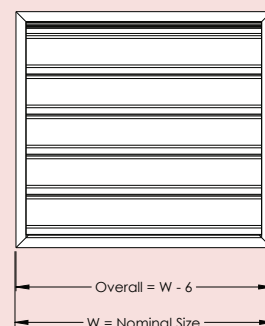
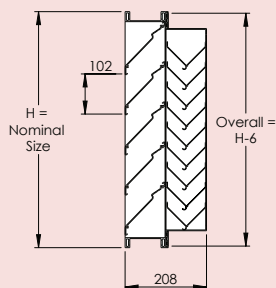
No louver manufacturer “guarantees” that their louvers will prevent water penetration under all possible wind and rain combinations. However, water penetration will be minimised if free area velocities, as shown in the pressure requirement table, are used in conjunction with the table on page 233F and velocities lower than those indicated for given penetration levels, are selected.

Water penetration usually does not need to be considered when selecting exhaust air louvers.

# Selection Data – OHL-100WT

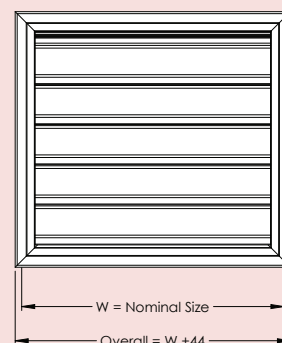
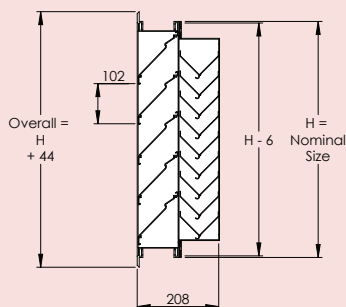
## Model: OHL-C-100WT

Two stage horizontal louver in a channel surround. Blade features a double weather stop.



## Model: OHL-F-100WT

Two stage horizontal louver in a flanged surround. Blade features a double weather stop.



## Models: OHL-F-100WT and OHL-C-100WT

### Effective pressure area (sq. metres)

Width "W", mm.	300	450	600	750	900	1050	1250	1500	1750	2000	2250	2500	
Height "H", mm.													0.1
300	0.01	0.01	0.02	0.03	0.04	0.04	0.04	0.06	0.07	0.07	0.09	0.09	0.2
400	0.02	0.03	0.04	0.05	0.07	0.07	0.09	0.11	0.13	0.15	0.17	0.19	0.3
500	0.03	0.04	0.06	0.08	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.5
600	0.04	0.06	0.08	0.10	0.12	0.14	0.18	0.22	0.26	0.29	0.33	0.37	0.75
700	0.04	0.07	0.10	0.13	0.16	0.18	0.23	0.27	0.31	0.37	0.41	0.46	1.0
800	0.05	0.09	0.12	0.15	0.19	0.21	0.27	0.32	0.38	0.44	0.49	0.55	1.5
900	0.07	0.10	0.14	0.18	0.22	0.25	0.31	0.38	0.44	0.50	0.57	0.64	
1000	0.07	0.12	0.16	0.20	0.25	0.28	0.36	0.43	0.50	0.58	0.65	0.73	
1100	0.08	0.13	0.18	0.23	0.28	0.31	0.40	0.48	0.57	0.65	0.73	0.82	
1200	0.09	0.15	0.20	0.26	0.31	0.35	0.45	0.53	0.63	0.72	0.82	0.91	
1300	0.10	0.16	0.22	0.28	0.34	0.39	0.49	0.59	0.69	0.80	0.90	1.00	
1400	0.11	0.18	0.24	0.31	0.37	0.42	0.53	0.64	0.75	0.86	0.98	1.09	
1500	0.12	0.19	0.26	0.34	0.41	0.45	0.58	0.69	0.82	0.93	1.06	1.18	
1600	0.12	0.20	0.28	0.36	0.44	0.49	0.62	0.75	0.88	1.01	1.14	1.27	
1700	0.13	0.22	0.30	0.39	0.47	0.53	0.66	0.80	0.94	1.08	1.22	1.36	
1800	0.15	0.23	0.32	0.41	0.50	0.56	0.71	0.85	1.00	1.15	1.30	1.45	
1900	0.15	0.25	0.34	0.44	0.53	0.59	0.75	0.91	1.07	1.22	1.38	1.54	
2000	0.16	0.26	0.37	0.46	0.56	0.63	0.80	0.96	1.12	1.29	1.46	1.63	

### Pressure requirement for outside louvers

Velocity, m/s **	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
Intake*	2	4	7	11	16	22	29	37	45	55	65	77	89	102
Exhaust*	1	3	5	8	11	15	19	24	30	37	43	51	59	68

\*Total Pressure Pa (N/m<sup>2</sup>) \*\*Velocity corresponding to Effective Pressure Area m<sup>3</sup>/s = Velocity Times Effective Pressure Area.

### Example of selection for outside louvers

Select an outside louver for supplying 0.581 m<sup>3</sup>/s with a pressure requirement of 11 Pa (N/m<sup>2</sup>).

- From pressure requirement table a velocity of 2.5 m/s is indicated as acceptable for an intake pressure of 11 Pa (N/m<sup>2</sup>).
- The effective pressure area corresponding to this velocity and air quantity is

$$\text{Area} = \frac{\text{m}^3/\text{s}}{\text{velocity}} = \frac{0.581}{2.5} = 0.23\text{m}^2$$

- For a model OHL-100WT louver, an effective pressure area of 0.23 m<sup>2</sup> is approximately satisfied by a 1050 wide x 700mm high; 450mm x 1400mm high, etc.

### Guide Product Weights

Model:	Size	Approximate Weight in Kg
OHL-C-100WT	600 x 650 O/A	11.9
OHL-F-100WT	600 x 650 Nominal	12.1

# OHCL, OHL, OHL-D, OHL-DRC, & OHL-LAOGS

## Louver Description Code Examples and Suggested Specifications

<b>OHCL</b>	—	<b>F</b> <b>C</b>	—	<b>102</b> <b>124</b>	—	<b>W x H</b>	—	<b>OPTIONS</b>	—	<b>FINISH</b>
Model - Closable Outside Horizontal Louver		Frame Style (F = Flange, C = Channel)		Blade size & configuration		Opening		24 V AC/DC Motor 230 V AC Motor		Powder Coat Anodised Mill Aluminium

Closable Horizontal Outside Louvers shall be of extruded aluminium construction with black anodised blades with integral flange and extruded vinyl edge seal. Fixed blades incorporate expanded aluminium bird screen. Blade closure is via Gang Linkage bars either manually, or by a factory fitted linear motor. Closable Louvers shall be Series OHCL. All shall be as manufactured by Holyoake.

<b>OHL</b>	—	<b>F</b> <b>C</b>	—	<b>34</b> <b>45</b> <b>102</b> <b>124</b>	—	<b>W x H</b>	—	<b>BM/IS</b>	—	<b>FINISH</b>
Model - Outside Horizontal Louver		Frame Style (F = Flange, C = Channel)		Blade size & configuration		Opening		Bird Mesh or Insect Screen		Powder Coat Anodised Mill Aluminium

Horizontal Outside Louvers shall be of extruded aluminium construction with 100 mm blades fixed at their ends with stainless steel screws into a welded aluminium frame. The bottom louver shall overlap the frame and the structure shall be designed to withstand a wind load of 95 Kg/m<sup>2</sup>. Louvers shall be type OHL - F - 102. All shall be as manufactured by Holyoake. [Example specification shown is for a flanged OHL-F-102].

<b>OHL</b>	—	<b>F</b> <b>C</b>	—	<b>D</b>	—	<b>W x H</b>	—	<b>BM/IS</b>	—	<b>FINISH</b>
Model - Outside Horizontal Louver		Frame Style (F = Flange, C = Channel)		Drainable Blade		Opening		Bird Mesh or Insect Screen		Powder Coat Anodised Mill Aluminium

Drainable Horizontal Outside Louvers shall be of extruded aluminium construction with blades which drain through vertical down pipes to discharge water at the bottom of the louver. Louvers shall be type OHL - D. All shall be as manufactured by Holyoake.

<b>OHL</b>	—	<b>F</b> <b>C</b>	—	<b>DRC</b>	—	<b>W x H</b>	—	<b>SECURITY MESH</b>	—	<b>OPTIONS</b>	—	<b>FINISH</b>
Model - Outside Horizontal Louver		Frame Style (F = Flange, C = Channel)		Drainable Closable Blade		Opening		Gym Mesh		24 V AC/DC Motor 230 V AC Motor		Powder Coat Anodised

Drainable Closable Horizontal Outside Louvers, shall be of extruded aluminium construction, with special overlapping drainable closable blades and complete with extruded aluminium security mesh on the rear. Blade closure is via Linkage bars in a concealed cavity, either manually, or by a suitable factory fitted motor. Drainable Closable Louvers shall be Series OHL - DRC. All shall be as manufactured by Holyoake.

<b>OHL</b>	—	<b>LAOGS</b>	—	<b>W x H</b>	—	<b>BM/IS</b>	—	<b>FINISH</b>
Model - Outside Horizontal Louver		Type		Opening		Bird Mesh or Insect Screen		Powder Coat Anodised Mill Aluminium

OHL - LAOGS Horizontal Outside Louvers shall be constructed from welded aluminium construction. Bird Mesh is fitted to the rear as standard. Louvers shall be type OHL-LAOGS. All shall be as manufactured by Holyoake.

# OVL, OHL-KD, PHL, ST2/4 & LOUVER DOOR

## Louver Description Code Examples and Suggested Specifications

<p><b>OVL</b> – <b>[ F ]</b> – <b>[ 99 ]</b> – <b>W x H</b> – <b>[ BM/IS ]</b> – <b>FINISH</b></p> <p style="text-align: center;"> <span style="border: 1px solid black; padding: 2px;">C</span> <span style="border: 1px solid black; padding: 2px;">148</span> </p>	<p>Model - Outside Vertical Louver</p> <p>Frame Style (F = Flange, C = Channel)</p> <p>Blade Size and Configuration</p> <p>Opening</p> <p>Bird Mesh or Insect Screen</p> <p>Powder Coat Anodised Mill Aluminium</p>	<p>Vertical Outside Louvers shall be of extruded aluminium construction with blades fixed at ends with stainless steel screws into a mitred and mechanically locked extruded aluminium frame. Intermediate blade stabilizing spacer clips shall be fitted where blade length exceeds 900mm and the structure shall be designed to withstand a wind load of 95kg/m<sup>2</sup>.</p> <p>Louvers shall be type OVL-C-99.</p> <p>All shall be as manufactured by Holyoake.</p> <p>(Example specification shown is for OVL-C-99).</p>
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<p><b>OHL-KD</b> – <b>100</b> – <b>W x H</b> – <b>[ BM/IS ]</b> – <b>FINISH</b></p>	<p>Model - Outside Horizontal Louver - Knock Down</p> <p>Blade Style</p> <p>Opening</p> <p>Bird Mesh or Insect Screen</p> <p>Powder Coat Anodised Mill Aluminium</p>	<p>OHL-KD (Knock Down) Outside Horizontal Louvers shall be manufactured from aluminium extrusion and are supplied in Kit Form for on site assembly, by others. The louver blades shall be sight proof, complete with two water stops and may be provided in a powder coat finish, with Bird Mesh, or Insect Screen.</p> <p>Louvers shall be type OHL - KD - 100.</p> <p>All shall be as manufactured by Holyoake.</p>
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<p><b>PHL</b> – <b>[ 102 ]</b> – <b>W x L x H</b> – <b>[ BM/IS ]</b> – <b>FINISH</b></p> <p style="text-align: center;"> <span style="border: 1px solid black; padding: 2px;">124</span> </p>	<p>Model - Penthouse Louver</p> <p>Blade Style</p> <p>Opening x Height</p> <p>Bird Mesh or Insect Screen</p> <p>Powder Coat Mill Aluminium</p>	<p>PHL Penthouse Louvers shall be constructed from welded aluminium extrusion with mitred corners. Heavy, extruded aluminium blades and heavy gauge aluminium roof, with bird mesh, or insect screen.</p> <p>Penthouse Louvers shall be Series PHL-102, or PHL-124.</p> <p>All shall be as manufactured by Holyoake.</p>
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<p><b>[ OHL – ST2 ]</b> – <b>W x H</b> – <b>FINISH</b></p> <p style="text-align: center;"> <span style="border: 1px solid black; padding: 2px;">ST4</span> </p>	<p>Model - ST2 (2 Row) ST4 (4 Row) Sound Trap</p> <p>Opening</p> <p>Mill Aluminium</p>	<p>OHL-ST Sound Trap attachments shall be constructed of a number of cylindrical sound absorbing elements, all housed in a sheet aluminium surround which matches the selected OHL louver.</p> <p>Sound Traps shall be Series OHL - ST2, or OHL - ST4.</p> <p>All shall be as manufactured by Holyoake.</p>
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<p><b>OHL-LOUVER DOOR</b> – <b>[ F ]</b> – <b>[ 34 ]</b> – <b>W x H</b> – <b>[ BM/IS ]</b> – <b>FINISH</b></p> <p style="text-align: center;"> <span style="border: 1px solid black; padding: 2px;">C</span> <span style="border: 1px solid black; padding: 2px;">45</span> <span style="border: 1px solid black; padding: 2px;">102</span> <span style="border: 1px solid black; padding: 2px;">124</span> <span style="border: 1px solid black; padding: 2px;">D</span> </p>	<p>Model - Outside Horizontal Louver Door</p> <p>Frame Style (F = Flange, C = Channel)</p> <p>Blade Size and Configuration</p> <p>Opening</p> <p>Bird Mesh or Insect Screen</p> <p>Powder Coat Anodised Mill Aluminium</p>	<p>OHL-LOUVER DOORS are robustly constructed with Aluminium box section frames and extruded aluminium blades of the size and configuration required. High quality stainless steel hinges shall be used to support the relevant door loads. A 'High Quality' lock set and handle shall be provided as standard, as well as rubber seals to eliminate door rattle.</p> <p>Louver Doors shall be Series OHL-Louver Doors.</p> <p>All shall be as manufactured by Holyoake.</p>
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<p><b>OHL</b> – <b>[ F ]</b> – <b>100WT</b> – <b>W x H</b> – <b>[ BM/IS ]</b> – <b>FINISH</b></p> <p style="text-align: center;"> <span style="border: 1px solid black; padding: 2px;">C</span> </p>	<p>Model - Two stage weather trap louver</p> <p>Frame Style (F = Flange, C = Channel)</p> <p>Blade Size and Configuration</p> <p>Opening</p> <p>Bird Mesh or Insect Screen</p> <p>Powder Coat Anodised Mill Aluminium</p>	<p>Horizontal Outside weather trap louvers shall be of extruded aluminium construction with 100mm front blades fixed at their ends and complete with second stage blades at the rear. The bottom louver shall overlap the frame and the structure shall be designed to withstand a wind load of 95 kg/m<sup>2</sup>.</p> <p>Louvers shall be type OHL-F-100WT.</p> <p>All shall be as manufactured by Holyoake.</p>
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