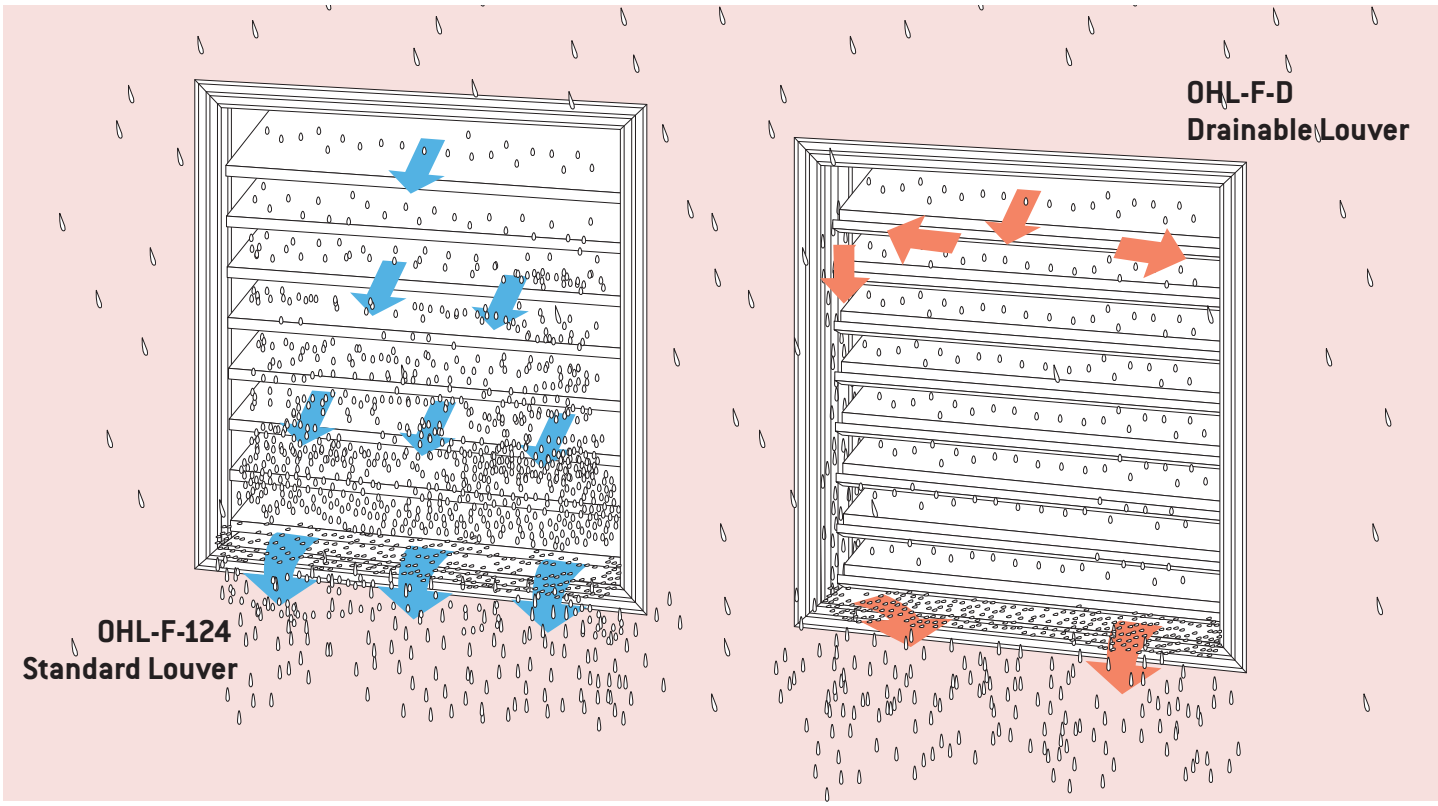
OHL-D – Drainable Louver



Holyoake Industries Model OHL-D offers an alternative concept in horizontal outside louvers. The drainable blade louver offers excellent water penetration performance.

The OHL-D louver achieves this by draining the water from each blade and discharging it at the bottom of the louver through vertical down pipes found at either side of the louver. Because of the gutter on each blade the water does not cascade down the face of the louver. This means that each blade only deals with the water that lands directly on it. In a typical horizontal louver, where the water does cascade down the face, the water builds to a level where the pressure differential and the velocity of the air over the louver is enough to carry over the water to the inside of the louver.

By avoiding this cascade effect the drainable horizontal louver offers excellent water penetration performance. The main benefit of this is that there is less water penetration at a given performance level. This means that there is the option of selecting an OHL-D louver at a higher effective velocity without compromising the water penetration performance. If a selection is made at a higher velocity the louver can then be smaller than a typical horizontal louver giving a direct saving on the louver size but also providing a smaller penetration for the building. If water penetration performance is of paramount concern the OHL-D offers the most effective way to achieve this.

Selecting a Louver

Air flow velocity through the louver's effective pressure area must be identified. This effective pressure area velocity determines if the louver size selected will minimise water penetration (due to weather) and establishes a pressure drop due to the air flow. No louver manufacturer "guarantees" that louvers will prevent water penetration under all possible combinations of wind and rain. However, water penetration will be minimised if free area velocities, as obtained in the tables from this section, 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.

Note

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

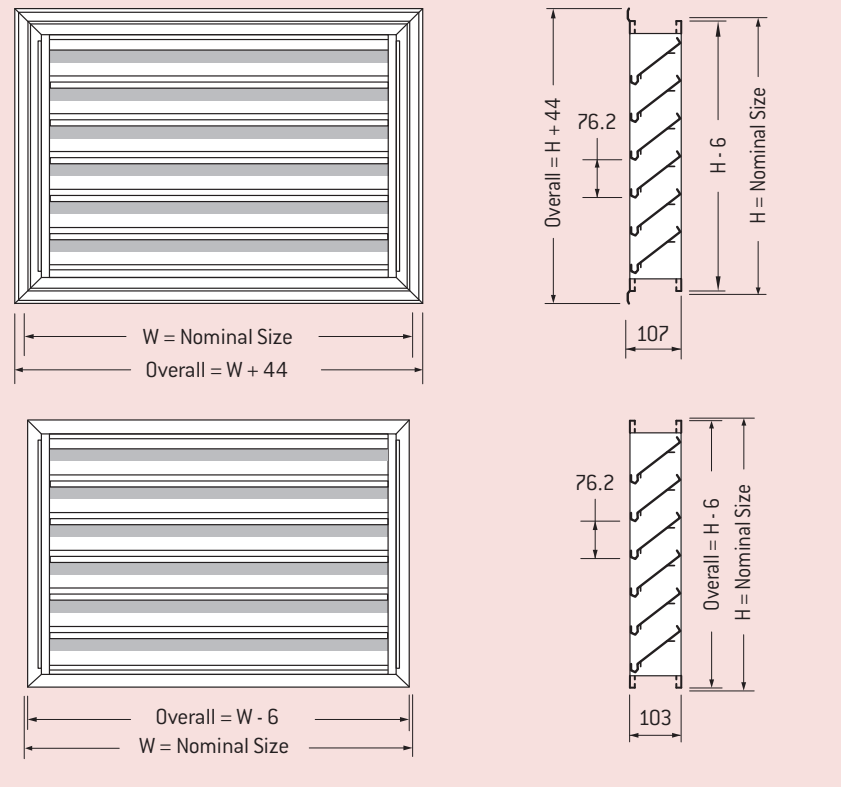
Model: **OHL-F-D**

Drainable blade horizontal louver in a flanged surround.

Guide Product Weights		
Approximate Weight in Kg.		
Size	OHL-F-D	OHL-C-D
300 x 300	2	2
500 x 500	5	5
900 x 900	12	12
1200 x 1200	19	19
1500 x 1800	33	33
2500 x 2000	56	56

Model: **OHL-C-D**

Drainable blade horizontal louver in a channel surround.



Note

On sections greater than 900mm wide a 40 x 40 mullion will be used to support the blades. This increases the depth of the louver by 40mm.

Model: **OHL-F-D and OHL-C-D**

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	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.20
400	0.03	0.05	0.08	0.10	0.12	0.13	0.17	0.20	0.24	0.28	0.31	0.35
500	0.05	0.08	0.11	0.14	0.17	0.19	0.24	0.29	0.34	0.39	0.44	0.49
600	0.06	0.10	0.14	0.18	0.22	0.24	0.31	0.37	0.44	0.51	0.57	0.64
700	0.07	0.12	0.17	0.22	0.27	0.30	0.38	0.46	0.54	0.62	0.70	0.78
800	0.09	0.15	0.20	0.26	0.32	0.35	0.45	0.54	0.64	0.73	0.83	0.92
900	0.10	0.17	0.23	0.30	0.37	0.41	0.52	0.63	0.74	0.85	0.96	1.07
1000	0.12	0.19	0.27	0.34	0.42	0.47	0.59	0.71	0.84	0.96	1.09	1.21
1100	0.13	0.21	0.30	0.38	0.46	0.52	0.66	0.80	0.94	1.08	1.22	1.36
1200	0.14	0.24	0.33	0.42	0.51	0.58	0.73	0.88	1.04	1.19	1.35	1.50
1300	0.16	0.26	0.36	0.46	0.56	0.63	0.80	0.97	1.14	1.31	1.48	1.65
1400	0.17	0.28	0.39	0.50	0.61	0.69	0.87	1.06	1.24	1.42	1.61	1.79
1500	0.19	0.30	0.42	0.54	0.66	0.74	0.94	1.14	1.34	1.54	1.74	1.94
1600	0.20	0.33	0.46	0.58	0.71	0.80	1.01	1.23	1.44	1.65	1.87	2.08
1700	0.21	0.35	0.49	0.62	0.76	0.85	1.08	1.31	1.54	1.77	2.00	2.22
1800	0.23	0.37	0.52	0.67	0.81	0.91	1.15	1.40	1.64	1.88	2.13	2.37
1900	0.24	0.40	0.55	0.71	0.86	0.96	1.22	1.48	1.74	2.00	2.26	2.51
2000	0.25	0.42	0.58	0.75	0.91	1.02	1.29	1.57	1.84	2.11	2.39	2.66

0.2 · 0.5 · 1 · 1.5 · 2

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/m²) ** Velocity corresponding to Effective Pressure Area m³/s = Velocity Times Effective Pressure Area.

Example of selection for outside louvers

Select an outside louver for exhausting 0.581 m³/s with a pressure requirement of 11 Pa (N/m²).

1. From pressure requirement table a velocity of 3.0 m/s is indicated as acceptable for an exhaust pressure of 11 Pa (N/m²).
2. The effective pressure area corresponding to this velocity and air quantity is

$$\text{Area} = \frac{\text{m}^3/\text{s}}{\text{velocity}} = \frac{0.581}{3} = 0.19\text{m}^2$$

3. For a Model OHL-F-D or OHL-C-D louver an effective pressure area of 0.19 m² is approximately satisfied by a 1050 mm wide x 500 mm high; 450 mm wide x 1000 mm high, etc.

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

Louver Description Code Examples and Suggested Specifications

OHCL	–	F / C	–	102 / 124	–	W x H	–	OPTIONS	–	FINISH
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.

OHL	–	F / C	–	34 / 45 / 102 / 124	–	W x H	–	BM/IS	–	FINISH
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/m².
Louvers shall be type OHL - F - 102.
All shall be as manufactured by Holyoake. [Example specification shown is for a flanged OHL-F-102).

OHL	–	F / C	–	D	–	W x H	–	BM/IS	–	FINISH
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.

OHL	–	F / C	–	DRC	–	W x H	–	SECURITY MESH	–	OPTIONS	–	FINISH
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.

OHL	–	LAOGS	–	W x H	–	BM/IS	–	FINISH
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

OVL – [F / C] – [99 / 148] – W x H – [BM/IS] – FINISH

Model - Outside Vertical Louver | Frame Style (F = Flange, C = Channel) | Blade Size and Configuration | Opening | Bird Mesh or Insect Screen | Powder Coat Anodised Mill Aluminium

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^2.

Louvers shall be type OVL-C-99.

All shall be as manufactured by Holyoake.

(Example specification shown is for OVL-C-99).

OHL-KD – 100 – W x H – [BM/IS] – FINISH

Model - Outside Horizontal Louver - Knock Down | Blade Style | Opening | Bird Mesh or Insect Screen | Powder Coat Anodised Mill Aluminium

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.

Louvers shall be type OHL - KD - 100.

All shall be as manufactured by Holyoake.

PHL – [102 / 124] – W x L x H – [BM/IS] – FINISH

Model - Penthouse Louver | Blade Style | Opening x Height | Bird Mesh or Insect Screen | Powder Coat Mill Aluminium

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.

Penthouse Louvers shall be Series PHL-102, or PHL-124.

All shall be as manufactured by Holyoake.

[OHL – ST2 / ST4] – W x H – FINISH

Model - ST2 (2 Row) ST4 (4 Row) Sound Trap | Opening | Mill Aluminium

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.

Sound Traps shall be Series OHL - ST2, or OHL - ST4.

All shall be as manufactured by Holyoake.

OHL-LOUVER DOOR – [F / C] – [34 / 45 / 102 / 124 / D] – W x H – [BM/IS] – FINISH

Model - Outside Horizontal Louver Door | Frame Style (F = Flange, C = Channel) | Blade Size and Configuration | Opening | Bird Mesh or Insect Screen | Powder Coat Anodised Mill Aluminium

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.

Louver Doors shall be Series OHL-Louver Doors.

All shall be as manufactured by Holyoake.

OHL – [F / C] – 100WT – W x H – [BM/IS] – FINISH

Model - Two stage weather trap louver | Frame Style (F = Flange, C = Channel) | Blade Size and Configuration | Opening | Bird Mesh or Insect Screen | Powder Coat Anodised Mill Aluminium

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/m2.

Louvers shall be type OHL-F-100WT.

All shall be as manufactured by Holyoake.

Visit www.productspec.net/holyoake for product drawings in REVIT.