OHL-DRC – Drainable Closable Louver

Model: **OHL-DRC**

The Holyoake OHL-DRC is a precisely made drainable, closable weather louver. It is constructed from extruded aluminium in a channel, or flanged frame, with special overlapping drainable, closable blades, operated by either manual, or motorised means.

The blades feature a special gutter, so each blade only deals with the water that lands directly onto it. Therefore, water does not stream down the front of the louver, but is directed by means of this gutter on the leading edge of each blade, to the external base of the louver.

In addition to the drainable blades the OHL-DRC also offers the unique combination of a closable louver, operated by a manual handle, or via a motor. This provides the facility to fully, or partially close the louver automatically, when linked to a moisture, or rain sensor, or other building management system.

On a typical horizontal louver, where water cascades down the face, the water builds to a level where the pressure differential and the velocity of air over the louver, is enough to carry over the water to the inside of the louver.

By avoiding this effect the OHL-DRC Drainable Closable louver offers excellent performance, so there is much less water intrusion at a given level and a higher effective velocity can be used, without compromising the water penetration performance. While open, they offer minimum airflow resistance, with low droplet penetration for normal weather.

Typical uses are to provide controlled air movement in Gymnasiums and Sports Halls, with the aesthetically pleasing clean lines of the rear of the louver.

Other uses include Plant Rooms, Factories, Power Stations and Emergency controllable air inlets for smoke clearance systems, (where louvers would normally remain closed, but would open to provide make up air on extract) and similar projects.

Standard Construction
Frame: 6063 T5 extruded aluminium, square cut corners, fixed with #10 screws for rigidity.
Blades: 6063 T5 extruded aluminium with integral gutter.
Security Mesh: Extruded aluminium Gym Mesh.
Finish: Powder Coat Finish.

Features
- Drainable blades to minimise water carry over.
- Closable for complete air inlet control.
- 3 way fixing bracket to optimise mounting positions.
- Square cut corners for rigidity.
- Manual Operating Lever.
- Motor Options.

Options
- A range of Powder Coat colours.
- A range of suitable motors to optimise control.

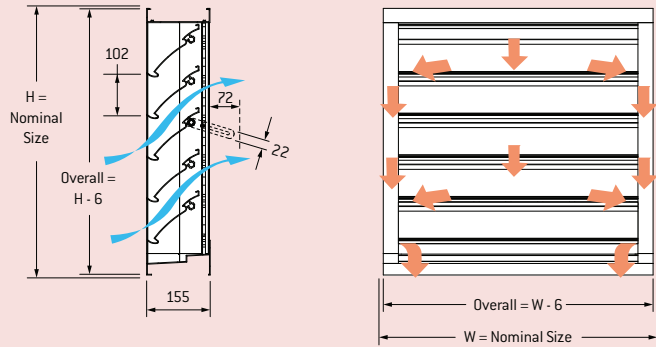### Drainable Closable Louver

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.

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

Model: **OHL-C-DRC**

170 mm horizontal drainable closable louvers in a channel surround.
Overlapping blades feature a drainage gutter, to direct water individually to the sides and then down to the external base of the louver. (Illustrated Open).

Model: **OHL-F-DRC**

170 mm horizontal drainable closable louvers in a flanged surround.
Overlapping blades feature a drainage gutter, to direct water individually to the sides and then down to the external base of the louver. (Illustrated Closed).
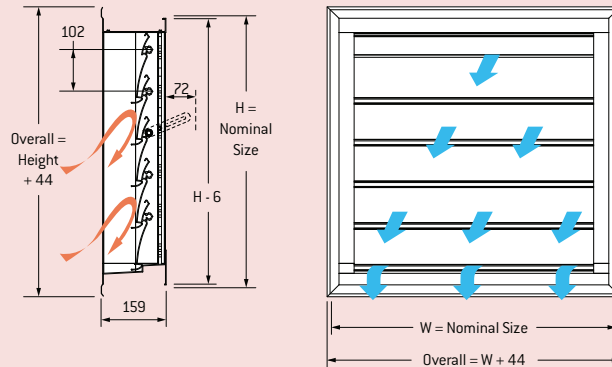
Models: **OHL-F-DRC and OHL-C-DRC**

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	0.02	0.03	0.04	0.05	0.05	0.06	0.08	0.09	0.10	0.12	0.13	0.2
400	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.15	0.18	0.20	0.23	0.26	0.3
500	0.04	0.06	0.08	0.11	0.13	0.15	0.18	0.22	0.26	0.30	0.34	0.38	
600	0.05	0.08	0.11	0.14	0.17	0.19	0.25	0.30	0.35	0.40	0.45	0.50	0.5
700	0.06	0.10	0.14	0.18	0.22	0.24	0.31	0.37	0.43	0.50	0.56	0.63	
800	0.07	0.12	0.17	0.21	0.26	0.29	0.37	0.44	0.52	0.60	0.67	0.75	0.75
900	0.09	0.14	0.19	0.25	0.30	0.34	0.43	0.52	0.60	0.69	0.78	0.87	
1000	0.10	0.16	0.22	0.28	0.34	0.38	0.49	0.59	0.69	0.79	0.89	1.00	1.0
1100	0.11	0.18	0.25	0.32	0.39	0.43	0.55	0.66	0.78	0.89	1.00	1.12	
1200	0.12	0.20	0.28	0.35	0.43	0.48	0.61	0.73	0.86	0.99	1.12	1.24	
1300	0.14	0.22	0.30	0.39	0.47	0.53	0.67	0.81	0.95	1.09	1.23	1.37	
1400	0.15	0.24	0.33	0.42	0.51	0.57	0.73	0.88	1.03	1.18	1.34	1.49	1.5
1500	0.16	0.26	0.36	0.46	0.56	0.62	0.79	0.95	1.12	1.28	1.45	1.61	
1600	0.17	0.28	0.39	0.49	0.60	0.67	0.85	1.03	1.20	1.38	1.56	1.74	
1700	0.18	0.30	0.41	0.53	0.64	0.72	0.91	1.10	1.29	1.48	1.67	1.86	
1800	0.20	0.32	0.44	0.56	0.68	0.77	0.97	1.17	1.37	1.58	1.78	1.98	
1900	0.21	0.34	0.47	0.60	0.73	0.81	1.03	1.24	1.46	1.67	1.89	2.11	
2000	0.22	0.36	0.50	0.63	0.77	0.86	1.09	1.32	1.54	1.77	2.00	2.23	

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 supplying 0.581 m³/s with a pressure requirement of 11 Pa (N/m²).

1. From pressure requirement table a velocity of 2.5 m/s is indicated as acceptable for an intake pressure of 11 Pa (N/m²).
2. The effective pressure area corresponding to this velocity and air quantity is

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

3. For a model OHL-DRC louver, an effective pressure area of 0.23 m² 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-DRC*	**648 x 753 O/A**	**10.54**
OHL-F-DRC*	**648 x 753 Nominal**	**12.54**
* Excluding Motor		

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

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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/m².

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.