TECHNICAL

Acutherm Therma-Fuser™ Diffuser

Model A-STHC

Acutherm's Therma-Fuser™ diffusers are ceiling diffusers with built in room thermostats and dampers for varying the air volume. The dampers are continuously adjusted by thermostat/actuators that are both room temperature sensors and damper motors.

Non electric thermostat/ actuators are brass cylinders containing a petroleum distillate wax that melts when heated and expands at precise temperatures, like those in the aerospace industry, positioning the damper in a proportional manner.

Thermostat/actuators open and close the dampers to vary the volume of air flow (warm or cold) into the room in response to room temperature. Room temperature is measured by inducing a sample of air from the room across the thermostat.

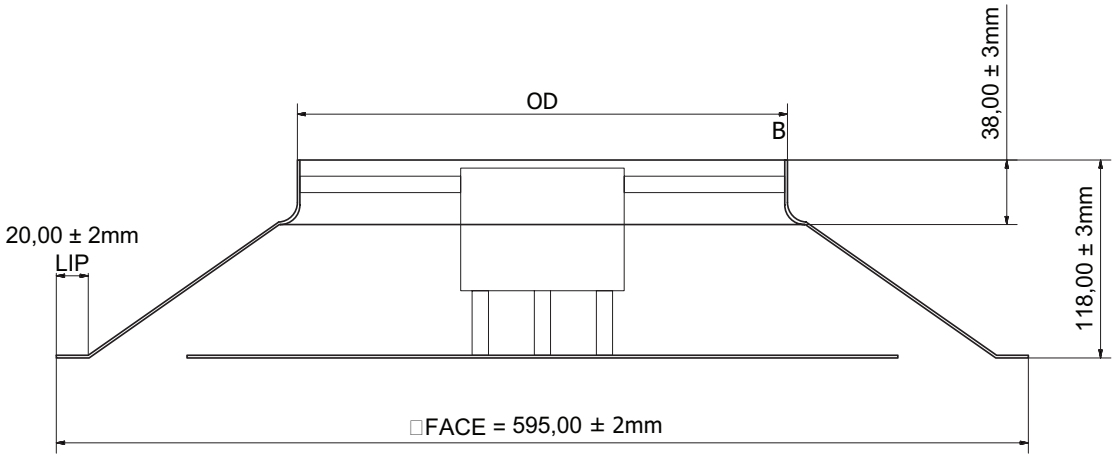
When supply air is warm, the Therma-Fuser diffuser operates in the heating mode and the dampers open on a drop in room temperature. When the supply air is cold, the diffuser operates in the cooling mode and the dampers open on a rise in room temperature.

Separate room temperature set points for heating and cooling are adjusted by aligning the indicators along °F or °C temperature scales.

Standard finish is powder coat white.

Features

- Face Size: 595 x 595 for lay-in T-Bar ceiling installations
- Inlet Diameter: 150 / 200 / 250 / 300 mm
- Pressure ranges: 12 to 62 Pa
- Air volumes: 50 to 350 l/s



acutherm™
Therma-Fuser™ Systems

Curved Blade Diffusers

Model ACBD

The Polyaire CBD Curved Blade Diffuser is designed for ceiling supply air applications.

Curved Blade Diffusers provide great flexibility as they are available in 1, 2, 3 and 4 way airflow patterns. The air distribution pattern can further be varied from horizontal to vertical by adjustment of the blades.

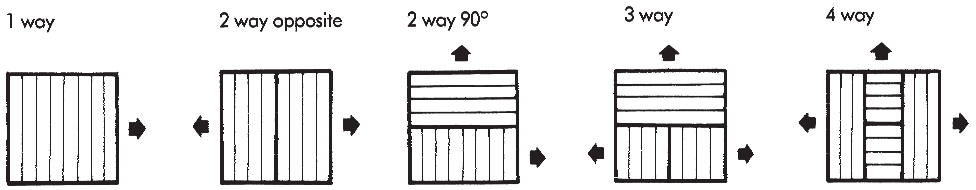
The curved blade profile creates minimum noise.

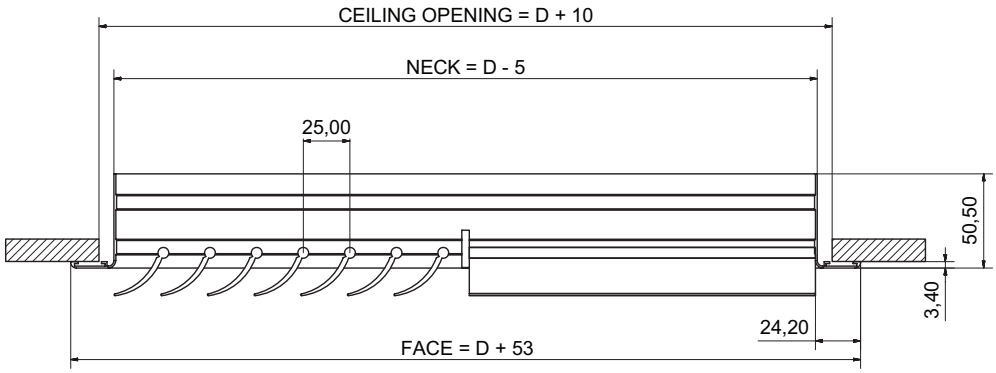
Manufactured from extruded aluminium the core can be provided as fixed or removable core.

Standard frame flange is 25mm. 32mm flange available on request.

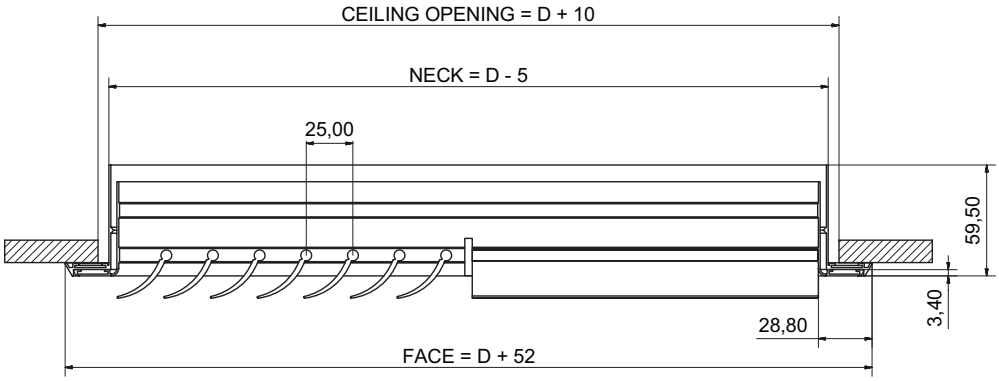
Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Aluminium Curved Blade Diffusers are manufactured to order.





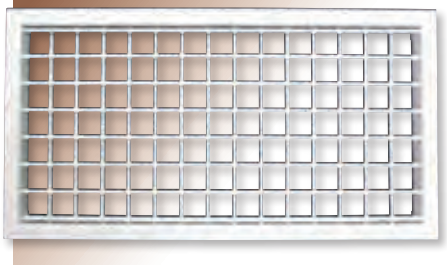
MODEL ACBD



MODEL ACBD-RC

Deflection Registers - Double

Model WSD



Universal Outlets or Double Deflection Registers are generally used in sidewall applications. They consist of two separate rows of individually adjustable vanes.

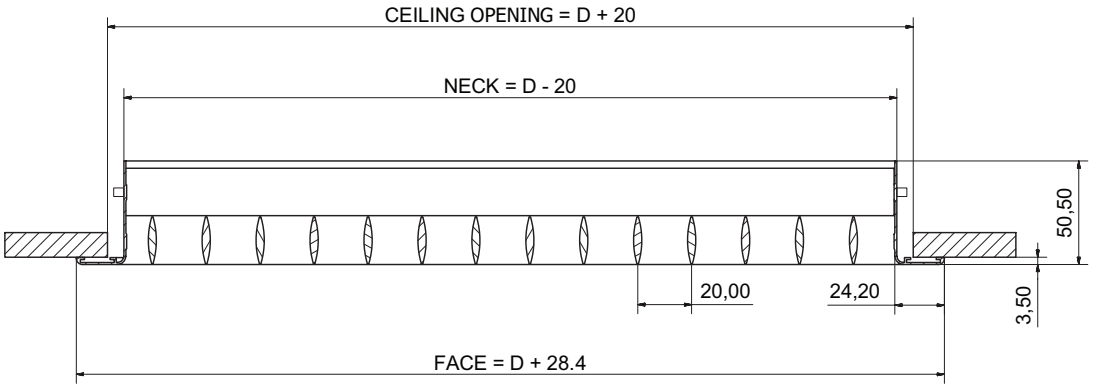
The FRONT VANES are horizontal so the primary air leaving the outlet is directed above the room occupants and does not reach the occupied zone until well mixed with the secondary room air.

The REAR VANES are vertical and are used to direct the air in a straight blow or spread the air as required by the room layout. If required, air flow can be directed at an angle to one or both sides, and still retain a near-parallel air stream pattern.

Construction is all extruded aluminium horizontal and vertical blades, retained in a fixed or removable Core. Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Curved Face double Deflection Registers can also be manufactured to suit Spiral Duct Installations.

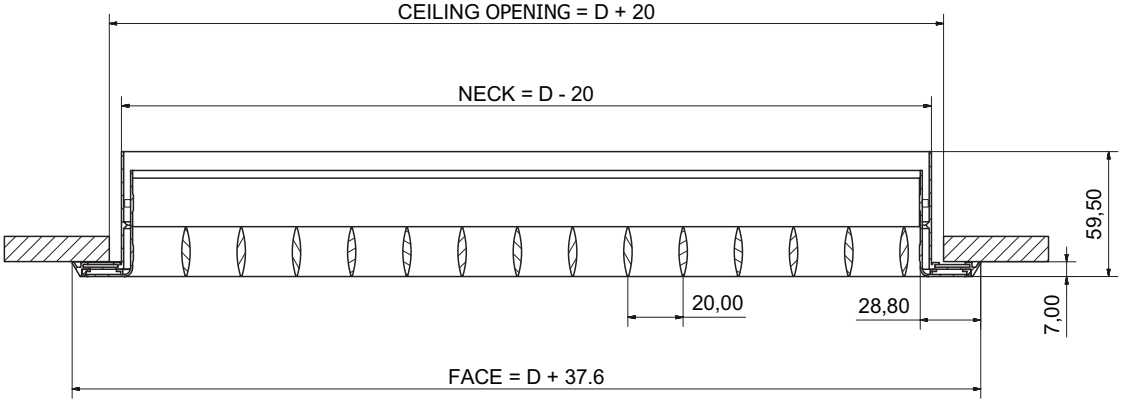
Double Deflection Registers can be manufactured in a wide range of sizes other than the stock sizes listed below.



MODEL WSD

Deflection Registers - Double

Model WSD-RC



MODEL WSD-RC

Deflection Registers - Double

MODEL WSD

Technical Data - WSD

SIZE (mm)		Airflow (l/s)										
		35	60	100	200	300	450	600	800	1000	1500	2000
200 x 150	Total Pressure (PA)	<2	5	16	44	-	-	-	-	-	-	-
	Throw (m)	2	3.5	6	10	-	-	-	-	-	-	-
	Neck Velocity (m/s)	1.2	2	3.2	6	-	-	-	-	-	-	-
	NR Level	-	<10	20	40	-	-	-	-	-	-	-
350 x 150	Total Pressure (PA)	-	<2	4.4	17.1	42.6	-	-	-	-	-	-
	Throw (m)	-	2.3	4.6	8.1	12.6	-	-	-	-	-	-
	Neck Velocity (m/s)	-	1	1.9	3.4	5.6	-	-	-	-	-	-
	NR Level	-	-	<10	25	43	-	-	-	-	-	-
400 x 200	Total Pressure (PA)	-	-	2	7	20.6	42.7	-	-	-	-	-
	Throw (m)	-	-	3.2	7	10.4	14.7	-	-	-	-	-
	Neck Velocity (m/s)	-	-	1.3	2.4	3.8	5.5	-	-	-	-	-
	NR Level	-	-	<10	16	32	44	-	-	-	-	-
600 x 300	Total Pressure (PA)	-	-	-	<2	4.1	8.2	15.3	25	-	-	-
	Throw (m)	-	-	2	4.6	7.5	10.4	13.4	17	-	-	-
	Neck Velocity (m/s)	-	-	0.5	1	1.8	2.5	3.3	4.2	-	-	-
	NR Level	-	-	-	<10	12	23	34	42	-	-	-
900 x 400	Total Pressure (PA)	-	-	-	-	<2	2.3	4.6	7.5	11	-25-	-
	Throw (m)	-	-	-	-	5.6	8	10	12.5	15	-21-	-
	Neck Velocity (m/s)	-	-	-	-	0.9	1.4	1.9	2.4	2.9	4.1	-
	NR Level	-	-	-	-	-	<10	18	25	33	44	-
1200 x 400	Total Pressure (PA)	-	-	-	-	-	-	2	4.5	7	12.5	24
	Throw (m)	-	-	-	-	-	-	8.7	11.5	13.5	18.4	22
	Neck Velocity (m/s)	-	-	-	-	-	-	1.4	1.8	2.2	3	3.9
	NR Level	-	-	-	-	-	-	10	18	24	37	44
1600 x 450	Total Pressure (PA)	-	-	-	-	-	-	-	2	3.3	6	10
	Throw (m)	-	-	-	-	-	-	7.8	9.4	11.5	16	19.2
	Neck Velocity (m/s)	-	-	-	-	-	-	-	1.3	1.3	2.3	2.7
	NR Level	-	-	-	-	-	-	<10	10	15	28	36

Notes:

1. Terminal Velocity is based at 0.25 m/s

2. NR value is based on a room absorbtion of 10 dB. Settings of 22° and 45° will have an increased sound level of 1 and 7 NR respectively

Deflection Registers - Double Curved Face MODEL WSD-CF

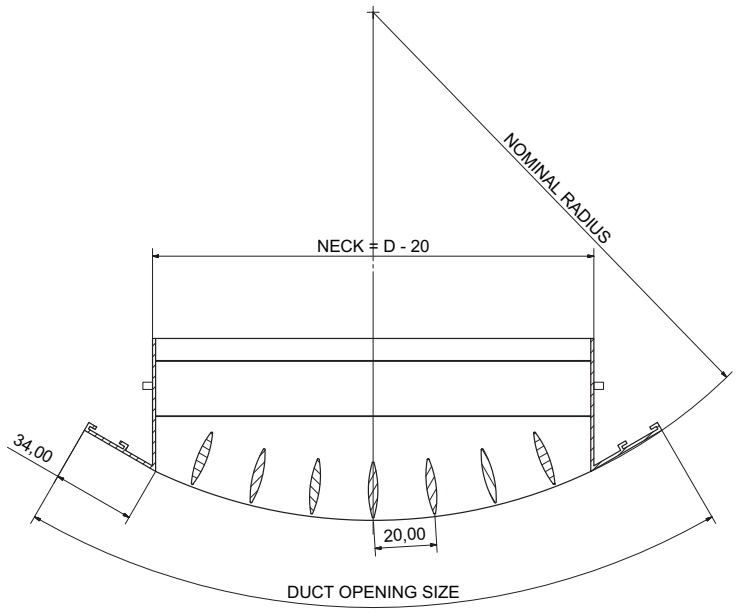
Curved Face Double Deflection Registers are manufactured to suit installations on circular or oval Spiral Duct.

They consist of two separate rows of individually adjustable vanes and the frame is curved to suit the diameter of the Spiral Duct

The FRONT VANES are horizontal so that the primary air leaving the outlet is directed above the room occupants and does not reach the occupied zone until well mixed with the secondary room air.

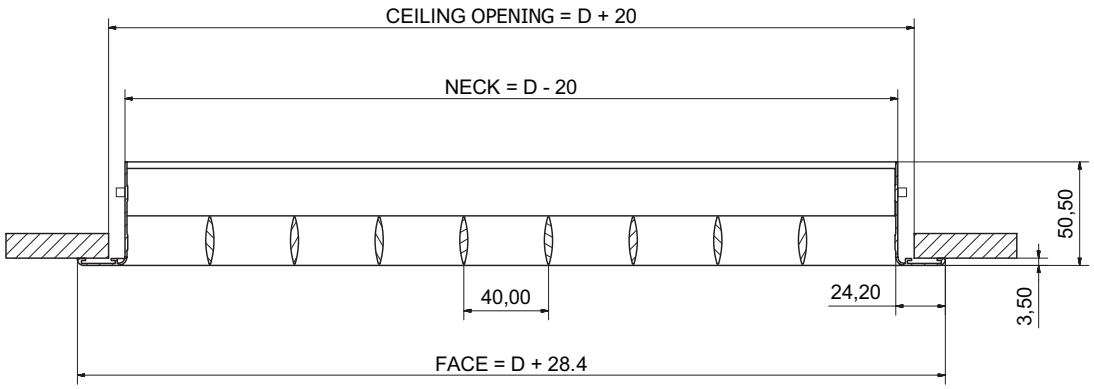
The REAR VANES are vertical and are used to direct the air in a straight blow or spread the air as required by the room layout. If required, air flow can be directed at an angle to one or both sides, and still retain a near-parallel air stream pattern.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.



MODEL WSD-CF

Deflection Registers - Double High Velocity MODEL WSD-HV



MODEL WSD-HV

Deflection Registers - Single

MODEL WSS

Single Deflection Registers are generally used in sidewall applications. They consist of a single row of individually adjustable horizontal vanes.

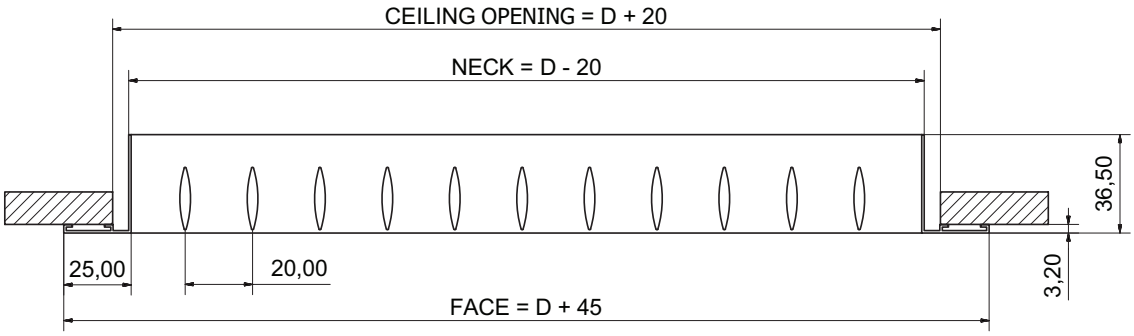
The FRONT VANES are horizontal so the primary air leaving the outlet is directed above the room occupants and does not reach the occupied zone until well mixed with the secondary room air.

Construction is all extruded aluminium horizontal blades, retained in a fixed or removable core.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Curved Face Single Deflection Registers can also be manufactured to suit Spiral Duct Installations.

Single Deflection Registers are manufactured to order in a wide range of sizes.



MODEL WSS

Half Chevron Louvre Grilles

Model WL

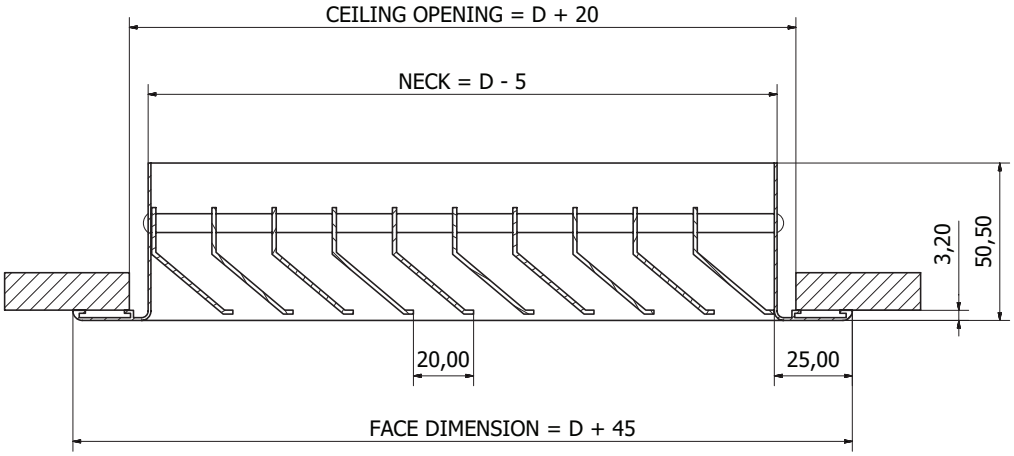
Polyaire Model WL Half Chevron Louvre Grilles are generally used as Wall Return Air Grilles, and are also suitable for exhaust and relief air applications.

Construction is from all aluminium extrusion with fixed half chevron blades.

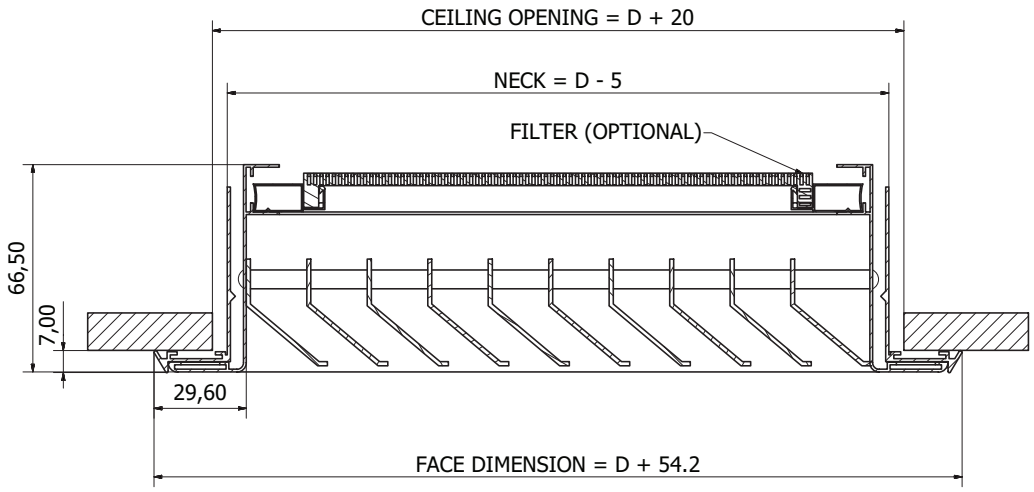
The core can be fixed, removable, hinged or hinged complete with panel filter. Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Model WL Louvre Grilles are manufactured to order in a wide range of sizes.

Free area is 63%



WL



WL-RC

Half Chevron Louvre Grilles

Model WL-RC

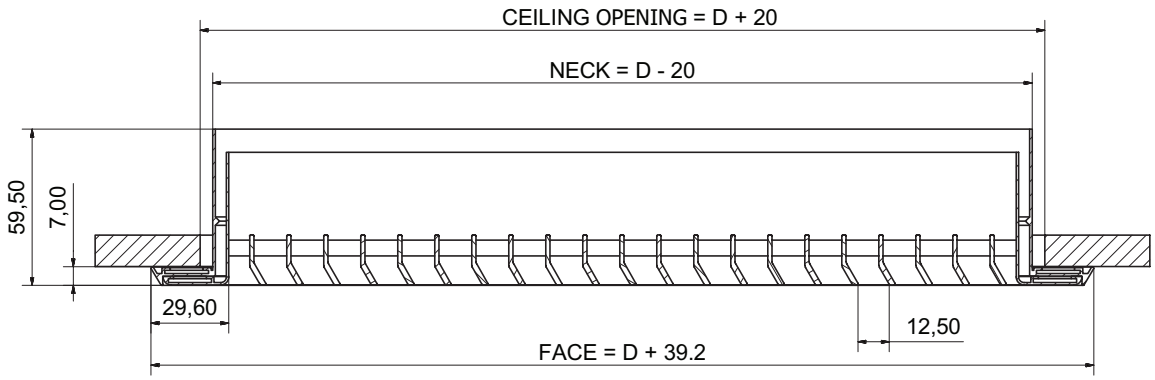
Polyaire Model WL-RC Half Chevron Louvre Grilles are generally used as Wall Return Air Grilles, and are also suitable for exhaust and relief air applications.

Construction is from all aluminium extrusion with fixed half chevron blades.

The core can be fixed, removable, hinged or hinged complete with panel filter. Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Model WL-RC Louvre Grilles are manufactured to order in a wide range of sizes.

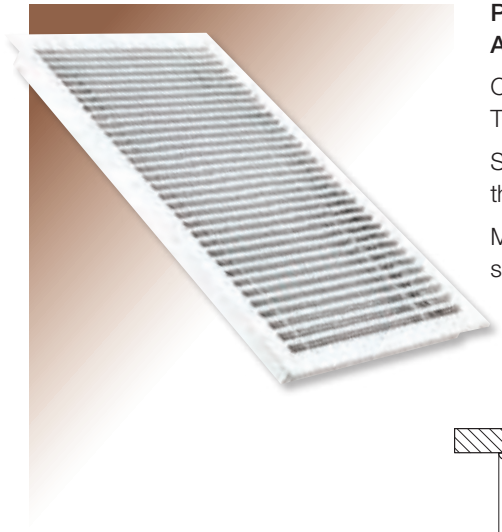
Free area is 63%



WL-RC

Half Chevron Louvre Grilles

Model WL-CV

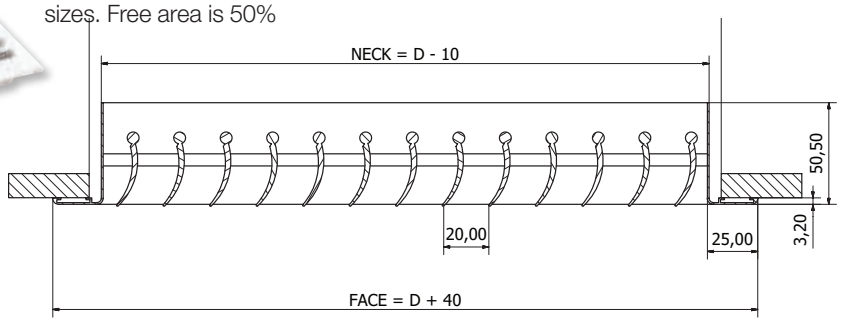


Polyaire Model WL-CV Louvre Grilles are generally used as Wall Return Air Grilles, and are also suitable for exhaust and relief air applications.

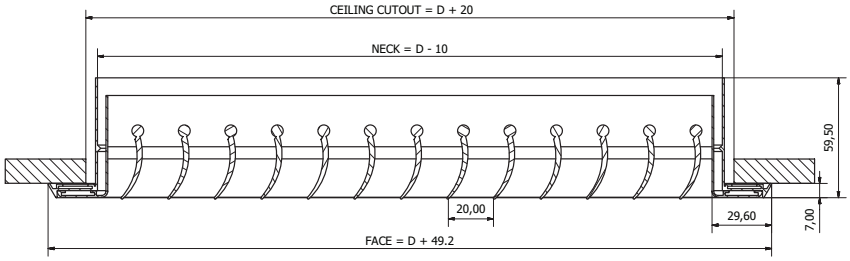
Construction is from all aluminium extrusion with fixed curved vane blades. The core can be fixed, removable, hinged or hinged complete with panel filter.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Model WL-CV Louvre Grilles are manufactured to order in a wide range of sizes. Free area is 50%



WL-CV



WL-CV-RC

Jet Diffusers - Eyeball

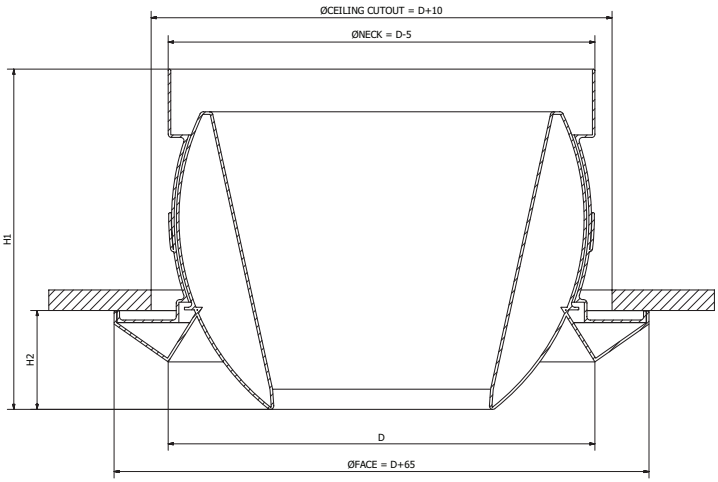
Model EJD

The Eyeball Jet Diffuser model EJD has been designed for long distance air throw applications providing an aesthetic alternative for handling large volumes of air.

The outlet direction can be regulated by rotation of the centre ball in any direction. Typical applications include Entertainment and Sports Venues, Airports, Shopping Centre, Warehouses and Industrial Areas.

Construction is from spun aluminium Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements

Available sizes include 150, 200, 250, 300 and 350mm Diameter.



Jet Diffusers

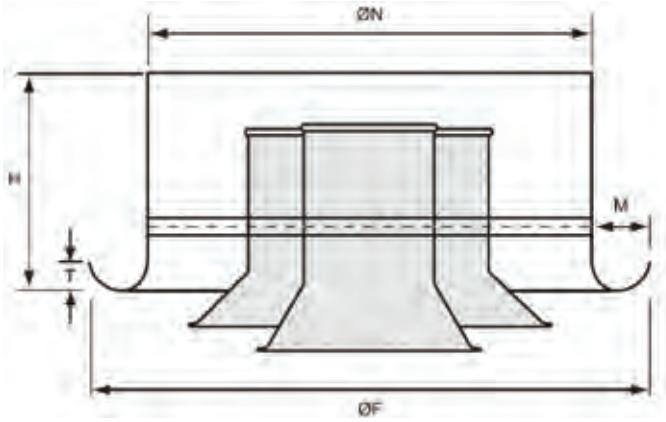
Model JAD

The Polyaire JAD Jet Diffuser is designed for the supply of large air volumes where long throw distances are required. Polyaire Jet Diffusers are used extensively in large areas and high ceiling applications such as Sports Centres, Airports, Entertainment Complexes, Shopping Centres and Industrial areas.

Jet Diffusers are also used for Spot Cooling or Heating and the Jet diffuser can be rotated by 180 degree by adjusting the core, changing the throw pattern from Jet to Diffused Mode.

The Polyaire Jet Diffuser is available as a single unit or alternatively multiple units can be mounted in a panel. Construction is from spun aluminium.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.



Model JAD

Sizes Available/Dimensions					
Size	**ØN**	**ØF**	**H**	**M**	**T**
200	198	264	92	33	15
250	248	312	123	33	16
300	295	375	149	40	18
350	345	425	172	40	18
400	395	495	179	50	18
500	495	595	248	50	26
600	595	715	300	60	30

Jet Ball Diffusers

Jet Ball Diffusers

Description	
Model	**Description**
245320	Jet Ball Diffuser 200
245321	Jet Ball Diffuser 250
245322	Jet Ball Diffuser 350
245323	Jet Ball Diffuser 315
245324	Jet Ball Diffuser 400

Jet Diffusers

MODEL JAD

Performance Data

Diffused Mode

SIZE (mm)	SELECTION PARAMETER	Neck Air Velocity (m/s) 1.5	2.0	2.5	3.0	3.5	4.0	5.0
200	Airflow Rate (l/s)	50	63	85	99	118	132	165
	Throw (m) Min-Max	2 - 3	2 - 4	3 - 5	4 - 6	5 - 6	5 - 7	6 - 10
	Pressure Loss (Pa)	8	15	22	33	45	59	90
	NR Level			18	26	30	35	45
250	Airflow Rate (l/s)	80	103	132	155	183	207	260
	Throw (m) Min-Max	2 - 4	3 - 5	4 - 6	5 - 7	6 - 9	7 - 11	8 - 13
	Pressure Loss (Pa)	8	12	21	29	44	53	88
	NR Level			23	28	34	38	46
300	Airflow Rate (l/s)	101	135	169	203	232	266	333
	Throw (m) Min-Max	2 - 5	5 - 7	8 - 9	10 - 11	12 - 14	14 - 16	16 - 17
	Pressure Loss (Pa)	8	10	19	26	33	49	75
	NR Level			24	28	34	38	47
350	Airflow Rate (l/s)	124	165	207	249	284	326	408
	Throw (m) Min-Max	3 - 5	6 - 7	8 - 10	10 - 12	13 - 15	16 - 17	18 - 20
	Pressure Loss (Pa)	8	11	18	25	35	48	70
	NR Level			25	28	34	38	48
400	Airflow Rate (l/s)	197	263	329	394	460	526	658
	Throw (m) Min-Max	3 - 6	5 - 8	10 - 11	11 - 13	14 - 15	16 - 18	19 - 21
	Pressure Loss (Pa)	8	14	18	29	41	52	65
	NR Level			28	35	40	43	50
500	Airflow Rate (l/s)	310	413	517	616	719	822	
	Throw (m) Min-Max	6 - 8	8 - 10	11 - 13	13 - 15	16 - 18	20 - 22	
	Pressure Loss (Pa)	8	12	19	27	37	48	
	NR Level		25	30	37	42	50	
600	Airflow Rate (l/s)	446	592	743	888	1034	1184	
	Throw (m) Min-Max	6 - 9	11 - 13	15 - 18	19 - 21	21 - 23	24 - 27	
	Pressure Loss (Pa)	9	13	21	27	43	48	
	NR Level		25	32	39	45	54	

Jet Mode

SIZE (mm)	SELECTION PARAMETER	Neck Air Velocity (m/s) 1.5	2.0	2.5	3.0	3.5	4.0	5.0
200	Airflow Rate (l/s)	50	63	85	99	118		
	Throw (m) Min-Max	3 - 5	5 - 7	7 - 8	9 - 11	12 - 14		
	Pressure Loss (Pa)	19	27	48	68	85		
	NR Level		26	35	41	47		
250	Airflow Rate (l/s)	80	103	132	155	183		
	Throw (m) Min-Max	4 - 6	7 - 9	10 - 12	13 - 15	16 - 17		
	Pressure Loss (Pa)	19	31	50	60	70		
	NR Level		29	37	39	45		
300	Airflow Rate (l/s)	101	135	169	203	232		
	Throw (m) Min-Max	5 - 7	8 - 11	11 - 13	14 - 16	17 - 20		
	Pressure Loss (Pa)	12	22	31	40	62		
	NR Level		24	28	33	40		
350	Airflow Rate (l/s)	124	165	207	249	284		
	Throw (m) Min-Max	6 - 8	9 - 12	13 - 15	17 - 20	21 - 23		
	Pressure Loss (Pa)	11	23	35	46	70		
	NR Level		26	32	36	40		
400	Airflow Rate (l/s)	197	263	329	394	460		
	Throw (m) Min-Max	8 - 11	12 - 15	16 - 19	20 - 23	25 - 27		
	Pressure Loss (Pa)	13	23	39	53	75		
	NR Level		27	34	38	46		
500	Airflow Rate (l/s)	310	413	517	616	719		
	Throw (m) Min-Max	13 - 15	16 - 19	21 - 25	26 - 29	30 - 34		
	Pressure Loss (Pa)	13	23	37	50	70		
	NR Level		28	34	38	50		
600	Airflow Rate (l/s)	446	592	743	888	1034		
	Throw (m) Min-Max	14 - 17	19 - 22	23 - 26	28 - 31	33 - 38		
	Pressure Loss (Pa)	13	30	40	55	75		
	NR Level		32	38	44	53		

Linear Bar Grilles

Model BG

The Polyaire range of Linear Bar Grilles are normally used where an architectural blend of the grille to its surroundings are required.

Polyaire Model BG Linear Bar Grilles are extremely versatile and can be mounted in the wall, sill, floor or ceiling.

Manufactured from extruded aluminium the Linear Bar Grilles may be used for either supply, return, relief or exhaust systems and typically are suitable for installation in Shops, Showrooms, Hotels, Conference Rooms, Commercial Offices, Reception Areas, Sports Halls, Leisure Centres and all Residential Applications.

The Polyaire Linear Bar Grilles are available with multiple blade profiles that include a slimline blade as well as a heavy duty blade. In addition these blade profiles are available with deflection angles of 0°, 15° and 30° providing a solution for every application. Providing further flexibility is the availability of 5 different flange styles ranging from flangeless to 25mm flange.

Construction is of a fixed core, while a removable or hinged core option is also available.

Standard finish is powder coat white while other finishes including anodising are available to suit the interior and architectural design requirements.

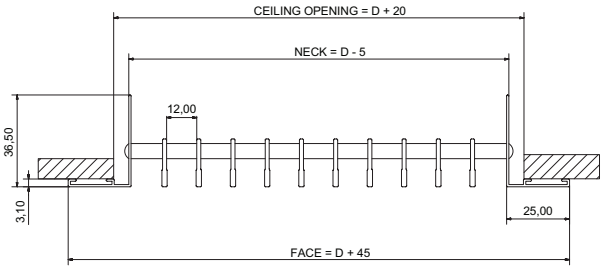
Polyaire Linear Bar Grilles are manufactured to order in various sizes and lengths including continuous applications with mitred corners.

Linear Bar Grille Model BG - Available Types & Models

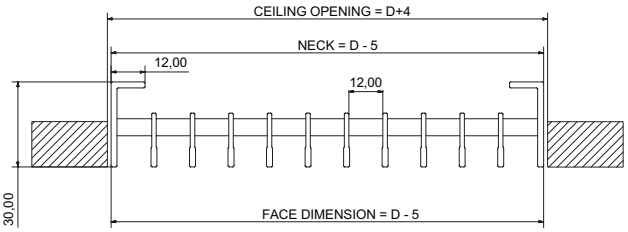
Description	
Model	**Description**
BG-A-0	Linear Bar Grille Type A-0 (Light Blade, 12.5mm Spacing, 0° Deflection)
BG-A-0-RC	Linear Bar Grille Type A-0 Removable Core (Light Blade, 12.5mm Spacing, 0° Deflection)
BG-A-0-HF	Linear Bar Grille Type A-0 Hinged with Filter (Light Blade, 12.5mm Spacing, 0° Deflection)
BG-A-0-VB	Linear Bar Grille Type A-0 (Light Blade, 12.5mm Spacing, 0° Deflection) with Rear Vertical Adjustable Blades
BG-A-15	Linear Bar Grille Type A-15 (Light Blade, 12.5mm Spacing, 15° Deflection)
BG-A-15-RC	Linear Bar Grille Type A-15 Removable Core (Light Blade, 12.5mm Spacing, 15° Deflection)
BG-A-15-HF	Linear Bar Grille Type A-15 Hinged with Filter (Light Blade, 12.5mm Spacing, 15° Deflection)
BG-A-15-VB	Linear Bar Grille Type A-15 (Light Blade, 12.5mm Spacing, 15° Deflection) with Rear Vertical Adjustable Blades
BG-A-30	Linear Bar Grille Type A-30 (Light Blade, 12.5mm Spacing, 30° Deflection)
BG-A-30-RC	Linear Bar Grille Type A-30 Removable Core (Light Blade, 12.5mm Spacing, 30° Deflection)
BG-A-30-HF	Linear Bar Grille Type A-30 Hinged with Filter (Light Blade, 12.5mm Spacing, 30° Deflection)
BG-A-30-VB	Linear Bar Grille Type A-30 (Light Blade, 12.5mm Spacing, 30° Deflection) with Rear Vertical Adjustable Blades
BG-B-0	Linear Bar Grille Type B-0 (Heavy Duty Blade, 12.5mm Spacing, 0° Deflection)
BG-B-0-RC	Linear Bar Grille Type B-0 Removable Core (Heavy Duty Blade, 12.5mm Spacing, 0° Deflection)
BG-B-15	Linear Bar Grille Type B-15 (Heavy Duty Blade, 12.5mm Spacing, 15° Deflection)
BG-B-15-RC	Linear Bar Grille Type B-15 Removable Core (Heavy Duty Blade, 12.5mm Spacing, 15° Deflection)
BG-C-0	Linear Bar Grille Type C-0 (Light Blade, 20mm Spacing, 0° Deflection)
BG-C-0-RC	Linear Bar Grille Type C-0 Removable Core (Light Blade, 20mm Spacing, 0° Deflection)
BG-C-15	Linear Bar Grille Type C-15 (Light Blade, 20mm Spacing, 15° Deflection)
BG-C-15-RC	Linear Bar Grille Type C-15 Removable Core (Light Blade, 20mm Spacing, 15° Deflection)
BG-C-30	Linear Bar Grille Type C-30 (Light Blade, 20mm Spacing, 30° Deflection)
BG-C-30-RC	Linear Bar Grille Type C-30 Removable Core (Light Blade, 20mm Spacing, 30° Deflection)
BG-D-0	Linear Bar Grille Type D-0 (Heavy Duty Blade, 20mm Spacing, 0° Deflection)
BG-D-0-RC	Linear Bar Grille Type D-0 Removable Core (Heavy Duty Blade, 20mm Spacing, 0° Deflection)
BG-D-15	Linear Bar Grille Type D-15 (Heavy Duty Blade, 20mm Spacing, 15° Deflection)
BG-D-15-RC	Linear Bar Grille Type D-15 Removable Core (Heavy Duty Blade, 20mm Spacing, 15° Deflection)
BG-B-0-HDFG	Linear Bar Grille Type B-0 Heavy Duty / Computer Floor Grille (Heavy Duty Blade, 12.5mm Spacing, 0° Deflection)
BG-B-15-HDFG	Linear Bar Grille Type B-15 Heavy Duty / Computer Floor Grille (Heavy Duty Blade, 12.5mm Spacing, 15° Deflection)

Linear Bar Grilles

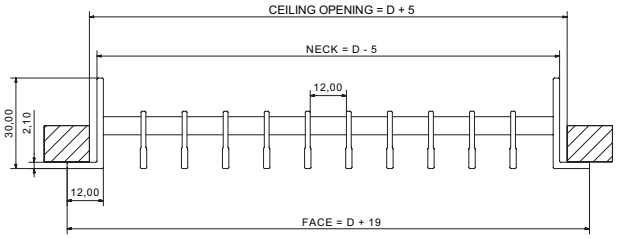
Model BG-A



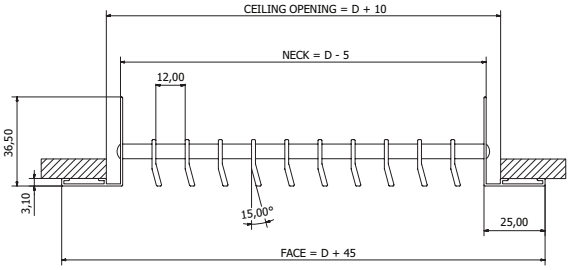
BG-A-0



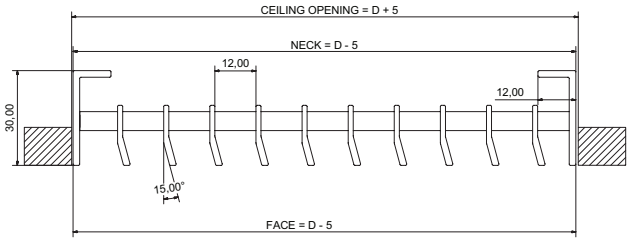
BG-A-0 Flangeless



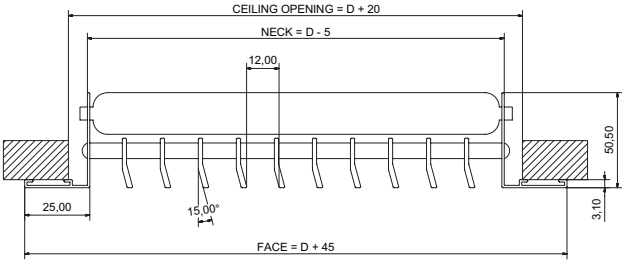
BG-A-0 12mm Flange



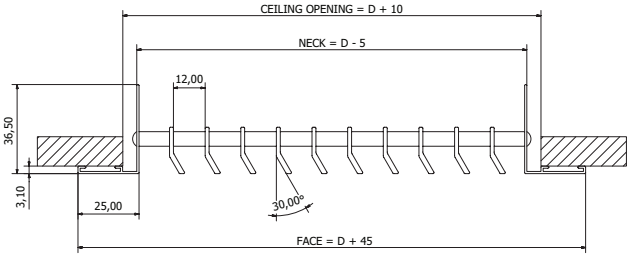
BG-A-15



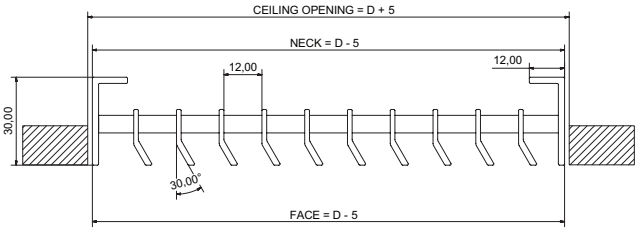
BG-A-15 Flangeless



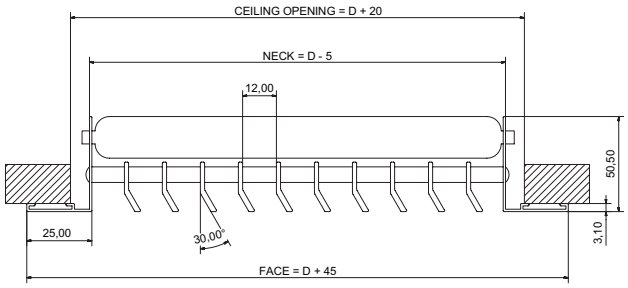
BG-A-15-VB



BG-A-30



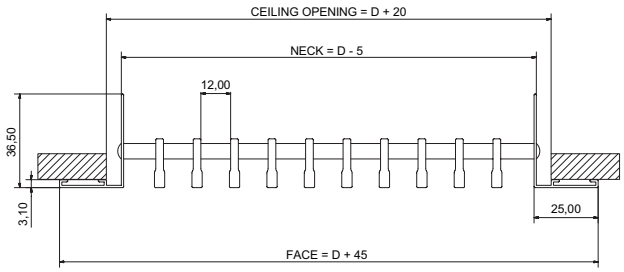
BG-A-30 Flangeless



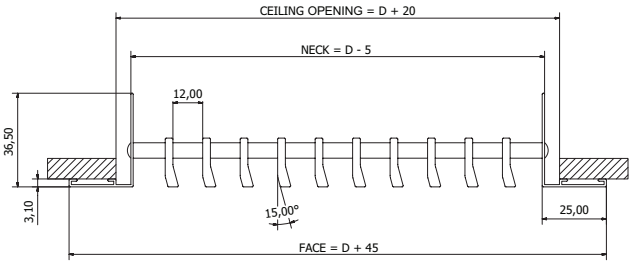
BG-A-30-VB

Linear Bar Grilles

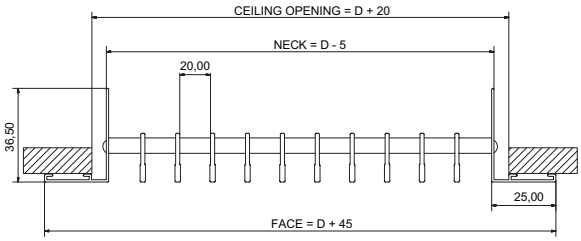
Model BG-B/C/D



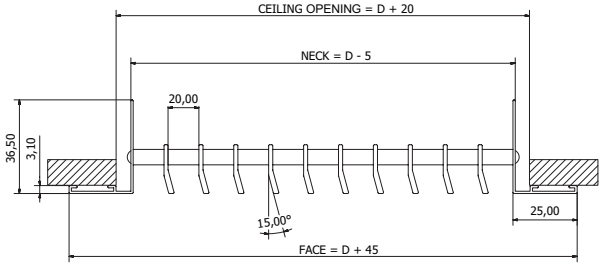
BG-B-0



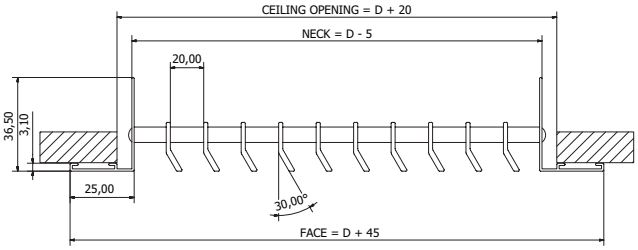
BG-B-15



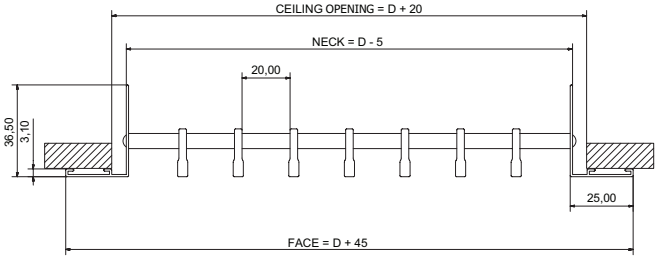
BG-C-0



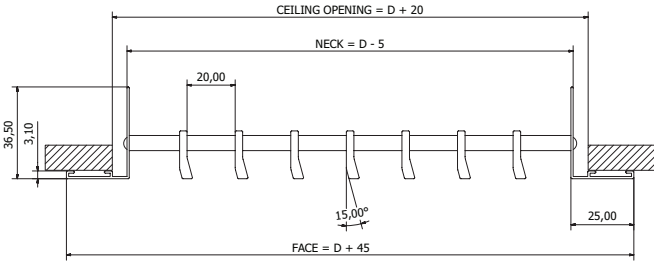
BG-C-15



BG-C-30



BG-D-0



BG-D-15

Linear Slot Diffusers

Model LSD

The Polyaire Linear Slot Diffusers are an attractive alternative to the ceiling or high sidewall supply diffusers. Slot diffusers can be installed individually in set lengths or in a continuous line. They can also be installed in any type of ceiling application.

The modules are available with a 20mm or 25mm Slot with the number of slots ranging from 1 to 8 slots and are further available as fixed or removable core. (Fixed Core - Model LSD-FC, Removable Core – LSD-RC.

The air pattern control is adjustable from the diffuser face and is achieved by means of an adjustable pattern control with each slot, enabling a full 180° air pattern adjustment. The suggested volume control should be from the main duct run take-off, or from a butterfly damper fitted to the inlet of the cushion head box.

Construction is from extruded aluminium and the recommended maximum length for each section is 3 metres. Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

Fixed Core Linear Model LSD

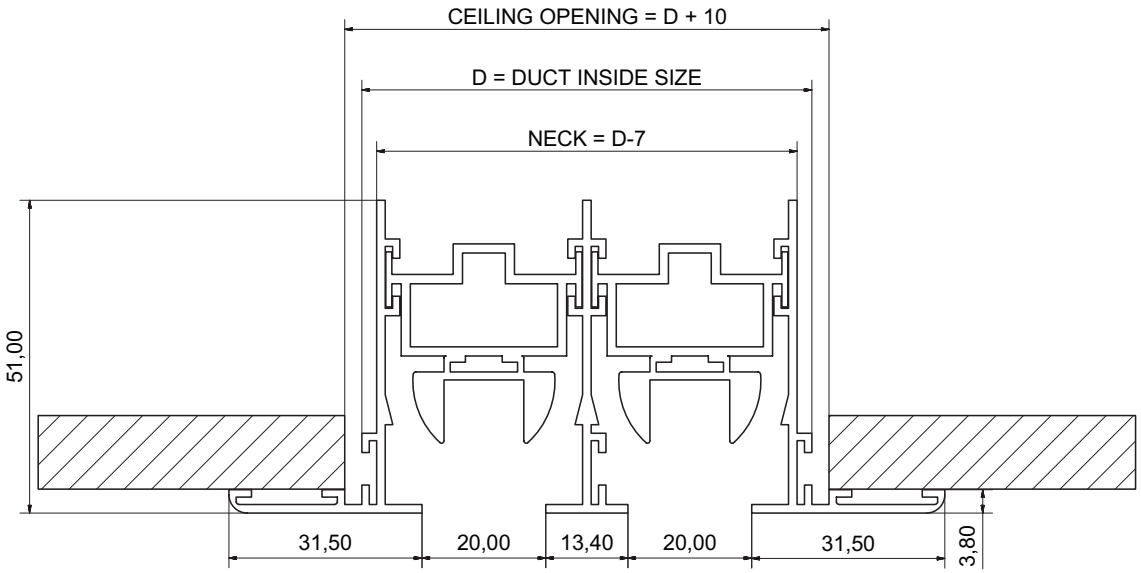
Sizes Available/Dimensions

No of slots	*20mm slot*			*25mm slot*		
	Neck size	Face size	Box size	Neck size	Face size	Box size
1	34	81	45mm	39	86	50mm
2	67	114	79mm	77	124	89mm
3	100	147	111mm	115	162	127mm
4	133	180	145mm	153	200	165mm
5	167	214	176mm	192	239	205mm
6	200	247	212mm	230	277	241mm
7	233	280	245mm	268	315	280mm
8	267	314	279mm	308	355	318mm

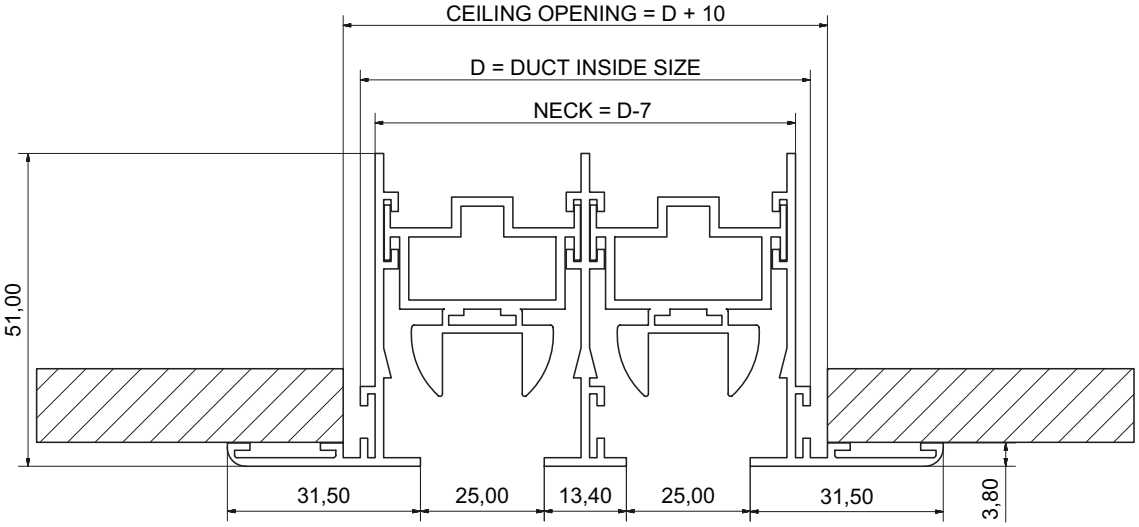
Removable Core Linear Model LSD-RC

Sizes Available/Dimensions

No of slots	*20mm slot*			*25mm slot*		
	Neck size	Face size	Box size	Neck size	Face size	Box size
1	45	85	55mm	50	90	60mm
2	78	118	89mm	88	128	99mm
3	111	151	123mm	126	166	137mm
4	144	184	150mm	164	204	175mm
5	178	218	189mm	203	243	214mm
6	211	251	222mm	241	281	252mm
7	244	284	255mm	279	319	290mm
8	278	318	289mm	319	359	329mm

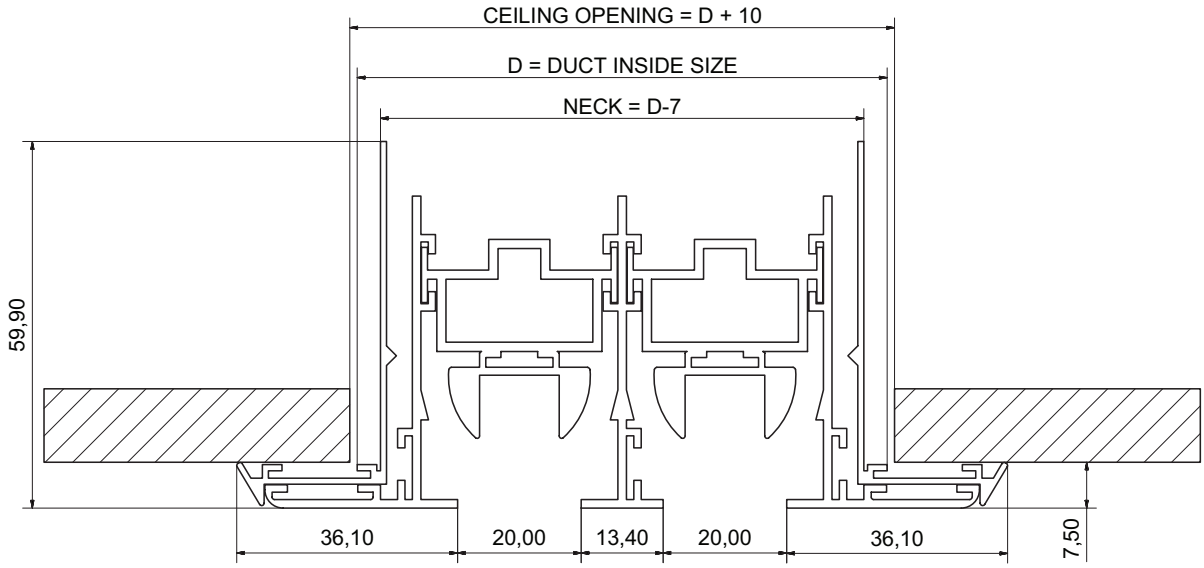


LSD 20mm

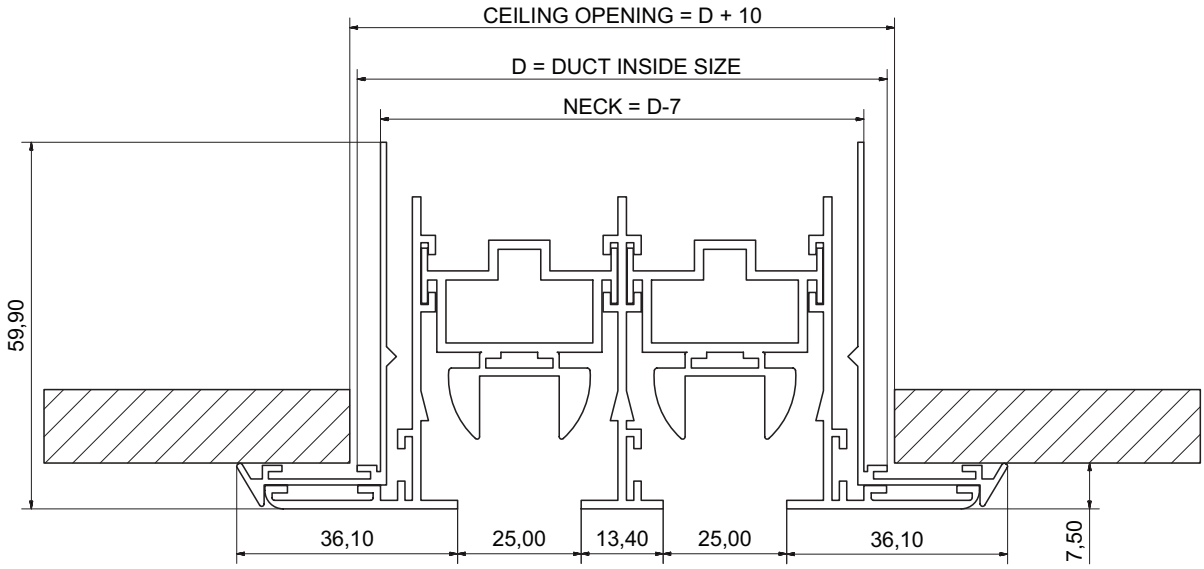


LSD 25mm

Linear Slot Diffusers



LSD-RC-20



LSD-RC-25

Slot Type Diffusers
Type LSD - Selection Data

Two Way Blow					
L/s per metre		2 slots wide	4 slots wide	6 slots wide	8 slots wide
31	Blow in m.	1.83	-	-	-
	Pressure drop (Pa)	2.5	-	-	-
	Suitable N/C level	less than 25	-	-	-
47	Blow in m.	2.74	-	-	-
	Pressure drop (Pa)	5	-	-	-
	Suitable N/C level	less than 25	-	-	-
62	Blow in m.	3.35	2.13	-	-
	Pressure drop (Pa)	10	2	-	-
	Suitable N/C level	25	less than 25	-	-
78	Blow in m.	3.96	2.74	-	-
	Pressure drop (Pa)	20	2.5	-	-
	Suitable N/C level	30	less than 25	-	-
93	Blow in m.	4.88	3.05	2.13	-
	Pressure drop (Pa)	2	5	2.5	-
	Suitable N/C level	32	less than 25	less than 25	-
108	Blow in m.	5.8	3.66	2.44	-
	Pressure drop (Pa)	32.4	7.5	2.5	-
	Suitable N/C level	35	less than 25	less than 25	-
124	Blow in m.	6.7	3.96	2.74	2.44
	Pressure drop (Pa)	40	10	5	2.5
	Suitable N/C level	38	less than 25	less than 25	less than 25
139	Blow in m.	-	4.57	3.05	2.44
	Pressure drop (Pa)	-	12.5	5	2.5
	Suitable N/C level	-	less than 25	less than 25	less than 25
155	Blow in m.	-	4.88	3.66	2.74
	Pressure drop (Pa)	-	17.4	7.5	2.5
	Suitable N/C level	-	25	less than 25	less than 25
170	Blow in m.	-	5.5	3.96	3.05
	Pressure drop (Pa)	-	27.4	7.5	5
	Suitable N/C level	-	30	25	less than 25
186	Blow in m.	-	6.1	4.26	3.35
	Pressure drop (Pa)	-	34.9	10	5
	Suitable N/C level	-	30	25	25
217	Blow in m.	-	-	4.88	3.96
	Pressure drop (Pa)	-	-	12.5	7.5
	Suitable N/C level	-	-	30	25
248	Blow in m.	-	-	5.5	4.57
	Pressure drop (Pa)	-	-	17.4	10
	Suitable N/C level	-	-	30	28
279	Blow in m.	-	-	6.7	5.5
	Pressure drop (Pa)	-	-	22.4	12.5
	Suitable N/C level	-	-	32	30
310	Blow in m.	-	-	7.62	6.1
	Pressure drop (Pa)	-	-	25	14.9
	Suitable N/C level	-	-	35	32

Slot Type Diffusers
Type LSD - Selection Data

L/s per metre		One Way Blow			
		1 slots wide	2 slots wide	3 slots wide	4 slots wide
16	Blow in m.	1.83	-	-	-
	Pressure drop (Pa)	2.5	-	-	-
	Suitable N/C level	less than 25	-	-	-
31	Blow in m.	3.4	2.1	-	-
	Pressure drop (Pa)	10	10	-	-
	Suitable N/C level	less than 25	less than 25	-	-
47	Blow in m.	4.9	3.0	2.1	-
	Pressure drop (Pa)	25	7.5	2.5	-
	Suitable N/C level	25	less than 25	less than 25	-
62	Blow in m.	6.7	4.0	2.7	2.4
	Pressure drop (Pa)	40	10	5	2.5
	Suitable N/C level	30	less than 25	less than 25	less than 25
78	Blow in m.	-	5.2	3.7	2.7
	Pressure drop (Pa)	-	15	7.5	2.5
	Suitable N/C level	-	less than 25	less than 25	less than 25
93	Blow in m.	-	6.1	4.3	3.4
	Pressure drop (Pa)	-	22	10	5
	Suitable N/C level	-	25	less than 25	less than 25
108	Blow in m.	-	7.3	4.9	4.0
	Pressure drop (Pa)	-	30	12.5	7.5
	Suitable N/C level	-	30	less than 25	less than 25
124	Blow in m.	-	-	5.5	4.6
	Pressure drop (Pa)	-	-	17.5	10
	Suitable N/C level	-	-	25	less than 25
139	Blow in m.	-	-	6.7	5.5
	Pressure drop (Pa)	-	-	22	12.5
	Suitable N/C level	-	-	30	less than 25
155	Blow in m.	-	-	7.6	6.1
	Pressure drop (Pa)	-	-	25	15
	Suitable N/C level	-	-	32	30

Linear Slot Diffusers

Model LSD-L

The Polyaire Linear Slot Diffusers Model LSD-L are an attractive alternative to the ceiling or high sidewall supply diffuser that has been designed for efficient air distribution. Model LSD-L Slot diffusers can be installed individually in set lengths or in a continuous line. Continuous runs can consist of a combination of active and inactive sections as well as combining supply and return air applications.

The modules are available with a 20mm or 25mm Slot with the number of slots ranging from 1 to 8 slots and are available as fixed core. They can also be installed in any type of ceiling application.

The air pattern control is adjustable from the diffuser face and is achieved by means of an adjustable pattern control with each slot, enabling a full 180° air pattern adjustment that provides draft free comfort for both heating and cooling applications.

The suggested volume control should be from the main duct run take-off, or from a butterfly damper fitted to the inlet of the cushion head box.

Construction is from extruded aluminium and the recommended maximum length for each individual section is 3 metres.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements

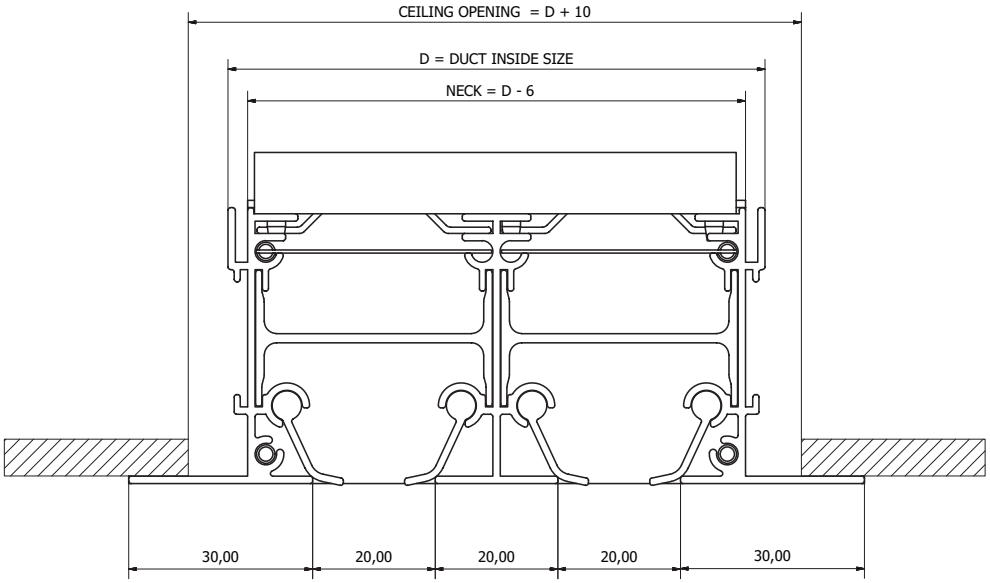
Fixed Core Linear Model LSD-L

Sizes Available/Dimensions

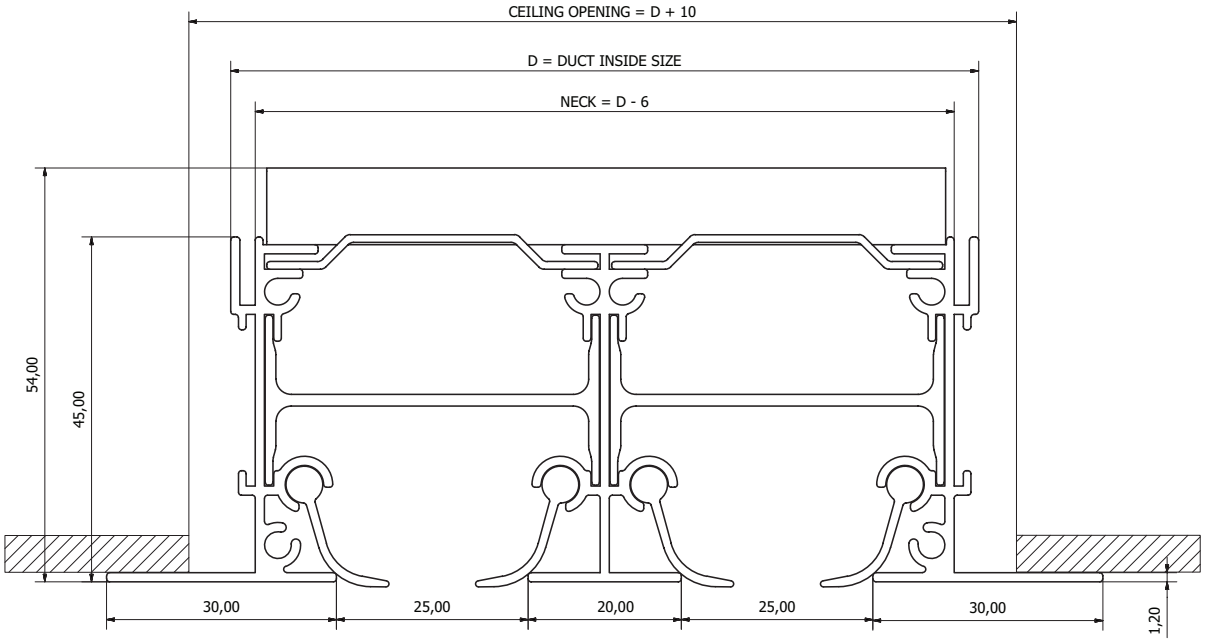
No of slots	*20mm slot*			*25mm slot*		
	Neck size	Face size	Box size	Neck size	Face size	Box size
1	41.2	80	43.5	46.2	85	48.5
2	81.2	120	83.5	91.2	130	93.5
3	121.2	160	123.5	136.2	175	138.5
4	161.2	200	163.5	181.2	220	183.5
5	201.2	240	203.5	226.2	265	228.5
6	241.2	280	243.5	271.2	310	273.5
7	281.2	320	283.5	316.2	355	318.5
8	321.2	360	323.5	361.2	400	363.5

Linear Slot Diffusers

Model LSD-L



LSD-L-20



LSD-L-25

Linear Slot Diffuser Selection - Horizontal Projection with Ceiling Effect

LSD-L-20

NO SLOTS	Total pressure (Pa)	<10	20	40	60	80
1	*L/s per metre*	26	38	52	70	84
	Horizontal throw (m) (0.25m/s terminal velocity)	1.2	2.8	4.2	6	7.1
	NR Sound Power Level (dB)	15	25	31	38	42
2	*L/s per metre*	50	78	108	140	165
	Horizontal throw (m) (0.25m/s terminal velocity)	2.6	4.9	6.8	9	10.5
	NR Sound Power Level (dB)	17	28	35	41	46
3	*L/s per metre*	78	118	160	209	260
	Horizontal throw (m) (0.25m/s terminal velocity)	3.6	6.4	8.8	11.1	13.2
	NR Sound Power Level (dB)	19	30	37	43	49
4	*L/s per metre*	100	160	222	300	350
	Horizontal throw (m) (0.25m/s terminal velocity)	4.6	7.5	10.2	13.4	15.2
	NR Sound Power Level (dB)	20	32	38	45	52
5	*L/s per metre*	130	195	274	350	412
	Horizontal throw (m) (0.25m/s terminal velocity)	5.3	8.6	11.3	14.1	16.8
	NR Sound Power Level (dB)	22	33	39	46	55
6	*L/s per metre*	151	240	325	416	510
	Horizontal throw (m) (0.25m/s terminal velocity)	6.1	9.5	12.8	16	18.1
	NR Sound Power Level (dB)	24	33	40	49	58
7	*L/s per metre*	180	278	381	496	595
	Horizontal throw (m) (0.25m/s terminal velocity)	6.8	10.2	13.6	17	19.4
	NR Sound Power Level (dB)	25	34	42	50	60
8	*L/s per metre*	206	328	432	576	668
	Horizontal throw (m) (0.25m/s terminal velocity)	7.4	11	14.2	18	20.2
	NR Sound Power Level (dB)	26	36	42	51	60

ACTIVE LENGTH CORRECTION TABLE		
Diffuser Active Length (m)	**Throw multiplier**	**Sound level correction**
0.4	0.6	-4 dB
0.5	0.7	-3 dB
1	1	0
1.5	1.15	-2 dB
2	1.25	-3 dB
3.0+	1.3	-5 dB

*The active length correction table can be used to determine the throw at different active lengths.

Linear Slot Diffusers

MODEL LSD-L

Linear Slot Diffuser Selection - Horizontal Projection with Ceiling Effect

LSD-L-25

NO SLOTS	Total pressure (Pa)	<10	20	40	60	80
1	*L/s per metre*	28	43	60	80	93
	Horizontal throw (m) (0.25m/s terminal velocity)	1.2	3	4.9	6.8	7.9
	NR Sound Power Level (dB)	15	25	32	38	42
2	*L/s per metre*	59	88	120	155	190
	Horizontal throw (m) (0.25m/s terminal velocity)	3	5.2	7.5	9.8	11.1
	NR Sound Power Level (dB)	18	29	36	42	46
3	*L/s per metre*	88	134	185	248	300
	Horizontal throw (m) (0.25m/s terminal velocity)	4.2	6.9	9.5	12	14
	NR Sound Power Level (dB)	20	31	37	44	50
4	*L/s per metre*	120	180	258	318	394
	Horizontal throw (m) (0.25m/s terminal velocity)	5.2	8	11	14	16
	NR Sound Power Level (dB)	22	33	38	46	52
5	*L/s per metre*	145	221	312	398	487
	Horizontal throw (m) (0.25m/s terminal velocity)	6	9.2	12.2	15.6	18
	NR Sound Power Level (dB)	24	34	40	47	58
6	*L/s per metre*	170	266	358	472	562
	Horizontal throw (m) (0.25m/s terminal velocity)	6.8	10	13.4	16.3	19
	NR Sound Power Level (dB)	25	34	41	49	59
7	*L/s per metre*	208	312	418	550	662
	Horizontal throw (m) (0.25m/s terminal velocity)	7.3	11	14.1	18	20.2
	NR Sound Power Level (dB)	26	35	42	50	60
8	*L/s per metre*	242	378	500	632	764
	Horizontal throw (m) (0.25m/s terminal velocity)	8	12	15.9	19.8	22
	NR Sound Power Level (dB)	26	36	43	52	62

ACTIVE LENGTH CORRECTION TABLE		
Diffuser Active Length (m)	**Throw multiplier**	**Sound level correction**
0.4	0.6	-4 dB
0.5	0.7	-3 dB
1	1	0
1.5	1.15	-2 dB
2	1.25	-3 dB
3.0+	1.3	-5 dB

*The active length correction table can be used to determine the throw at different active lengths.

Linear Slot Diffuser Selection - Vertical / Sidewall projection (No Wall or Ceiling Effect)

LSD-L-25

NO SLOTS	Total pressure (Pa)	<10	20	40	60	80
1	*L/s per metre*	28	43	58	78	92
	Throw (m) (0.50m/s terminal velocity)	0.9	2	3.2	4.5	5.4
	NR Sound Power Level (dB)	15	25	32	37	41
2	*L/s per metre*	58	85	130	158	190
	Throw (m) (0.50m/s terminal velocity)	2	3.5	5.1	6.8	7.9
	NR Sound Power Level (dB)	11	28	36	41	45
3	*L/s per metre*	86	168	182	245	295
	Throw (m) (0.50m/s terminal velocity)	2.9	4.7	6.4	8.1	9.5
	NR Sound Power Level (dB)	12	30	36	44	50
4	*L/s per metre*	138	180	240	312	390
	Throw (m) (0.50m/s terminal velocity)	3.5	5.6	7.5	9.2	11
	NR Sound Power Level (dB)	12	32	38	45	51
5	*L/s per metre*	144	220	300	395	480
	Throw (m) (0.50m/s terminal velocity)	4	6.1	8.2	10.1	12
	NR Sound Power Level (dB)	18	33	39	46	55
6	*L/s per metre*	170	265	345	450	550
	Throw (m) (0.50m/s terminal velocity)	4.4	6.9	9	11	12.5
	NR Sound Power Level (dB)	24	34	40	47	58
7	*L/s per metre*	200	300	400	530	620
	Throw (m) (0.50m/s terminal velocity)	5	7.2	9.6	12	15
	NR Sound Power Level (dB)	25	35	40	49	60
8	*L/s per metre*	240	360	485	610	780
	Throw (m) (0.50m/s terminal velocity)	5.4	8	10	13	15
	NR Sound Power Level (dB)	25	35	41	50	60

ACTIVE LENGTH CORRECTION TABLE		
Diffuser Active Length (m)	**Throw multiplier**	**Sound level correction**
0.4	0.6	-4 dB
0.5	0.7	-3 dB
1	1	0
1.5	1.15	-2 dB
2	1.25	-3 dB
3.0+	1.3	-5 dB

*The active length correction table can be used to determine the throw at different active lengths.

Outside Air Louvre

MODEL OAL-L

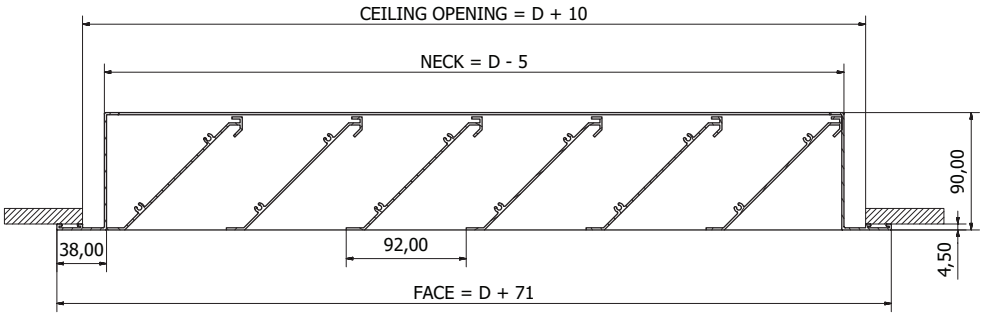
The Polyaire Large Section Outside Air Louvre model OAL-L is normally used for large sizes and large air quantities.

Construction is from all extruded aluminium with a standard flange of 32mm.

A Bird screen of 12mm x 12mm square mesh is fitted to the rear as an option.

Standard finish is natural anodised while other finishes including powder coat are available to suit the interior and architectural design requirements.

Model OAL-L Outside Air Louvres are manufactured to order in a wide range of sizes.



MODEL OAL-L

Selection Data - OAL-L

Nominal Height (mm)	203	305	380	460	535	610	685	760	840	915	1070	1525
Free Area %	40.0	46.8	50.0	52.0	53.4	55.0	55.7	56.0	57.0	57.0	58.0	62.5

Selection Data for OAL (S & L) Outside Air Louvres

	Jet Velocity m/s												
Nominal Face Velocity m/s	1.0	2.50	2.17	2.03	1.96	1.91	1.85	1.83	1.81	1.79	1.78	1.76	1.64
	1.5	3.76	3.25	3.05	2.98	2.86	2.77	2.74	2.73	2.69	2.68	2.64	2.44
	2.0	5.03	4.34	4.06	3.91	3.81	3.71	3.66	3.63	3.58	3.56	3.51	3.25
	2.5	6.30	5.44	5.08	4.88	4.78	4.62	4.57	4.55	4.47	4.45	4.39	4.06
	3.0	7.62	6.50	6.10	5.88	6.22	6.05	5.49	5.45	5.39	5.36	5.28	4.88
	3.5	-	-	7.11	6.81	6.66	6.46	6.40	5.85	6.30	6.25	6.15	5.69
	4.0	-	-	-	-	-	-	7.32	7.26	7.21	7.16	7.01	6.50

Outside Air Louvre

Model OAL-S

Polyaire Model OAL Outside Air Louvres are designed to provide weather protection of outside air or discharge openings yet to allow free passage of air. These external Louvres may also be used for natural ventilation.

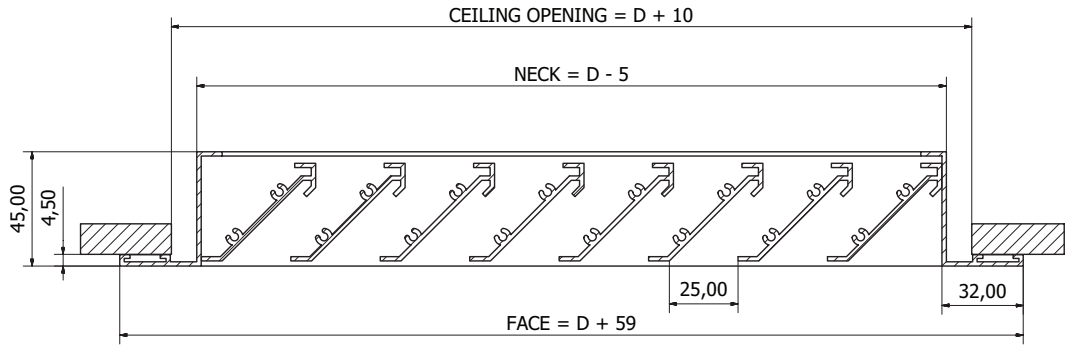
Polyaire manufacture both a small section and a large section outside air louvre as detailed below.

The Polyaire Small Section Outside Air louvre model OAL-S is normally used for small sizes and small air quantities.

Construction is from all extruded aluminium with a standard flange of 32mm. A Bird screen of 12mm x 12mm square mesh is fitted to the rear as an option.

Standard finish is natural anodised while other finishes including powder coat are available to suit the interior and architectural design requirements.

Model OAL-S Outside Air Louvres are available in stock sizes and can also be manufactured to order in a wide range of sizes.



MODEL OAL-S

Selection Data - OAL-S

Nominal Height (mm)	140	170	200	240	270	300	330	400
Free Area %	38.6	42.4	45.0	45.0	46.7	48.0	49.1	49.5

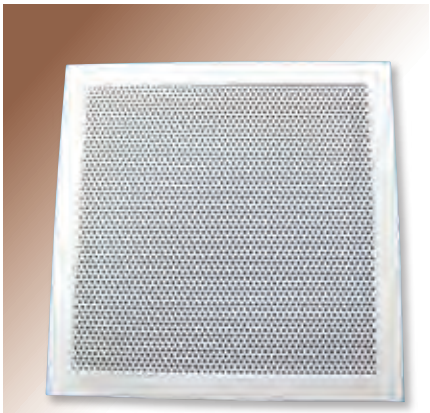
Outside Air Louvre - Round

Outside Air Louvre - Round

Description	
Model	**Description**
244010	OUTSIDE AIR LOUVRE GRILLE ROUND 150 X 150
244011	OUTSIDE AIR LOUVRE GRILLE ROUND 200 X 200

Perforated Diffusers

MODEL PD



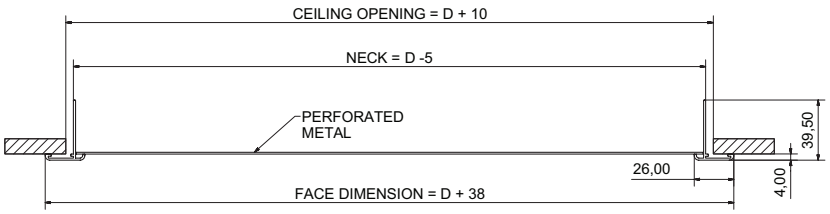
The Polyaire PD Perforated Diffuser are available with a square or rectangular face supplied through a round or square neck.

Standard construction is of a fixed core, while a removable or hinged core option is available.

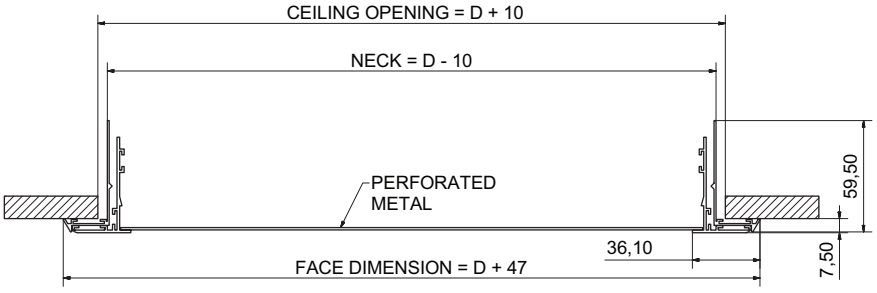
Perforated Diffusers can also be manufactured in a heavy robust form for Security Grille applications.

Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.

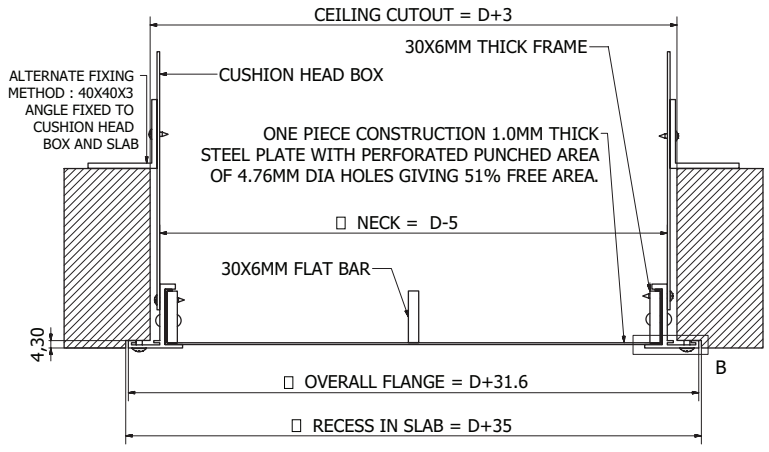
Perforated Diffusers are manufactured to order, standard free area is 51%



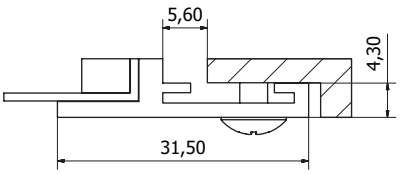
MODEL PD



MODEL PD-RC (Removable Core)



MODEL PD-HDSG (Heavy Duty Security Grille)



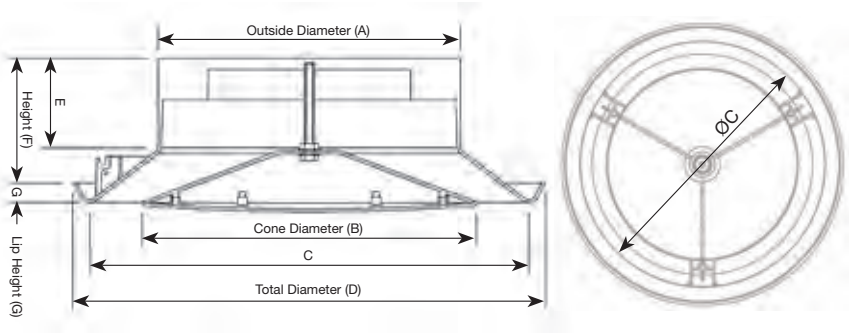
B - RECESSED FLANGE (3 : 1)

Round Diffusers

Model PCD

The Polyaire Round Ceiling Diffuser is manufactured from high impact engineering grade plastic for long term strength and rigidity. It is fully adjustable by rotating the centre cone from total shutoff to fully open.

The standard colour is off-white, the outer surface is lightly etched to reduce reflection and fit unobtrusively with most decors. Available in 3 sizes, it allows for smooth quiet airflow that flows out in a concentric pattern across the ceiling, to provide good coverage in both cooling and most heating applications.



Model PCD

Sizes Available/Dimensions								
Item #	Description	A	B	C	D	E	F	G
235384	150mm diam Round Ceiling Diffuser	147.5	170	225	250	55	70	16.6
237100	200mm diam Round Ceiling Diffuser	198	225	293	325	76	95	19.5
237101	250mm diam Round Ceiling Diffuser	250	280	365	385	76.5	101	19.6
237102	300mm diam Round Ceiling Diffuser	298	327	415	443	71	100	19.6

Round Jet Diffusers

Model PJD

The Polyaire Roundjet is designed to jet the airflow right down to the floor which aids in mixing and circulating the air.

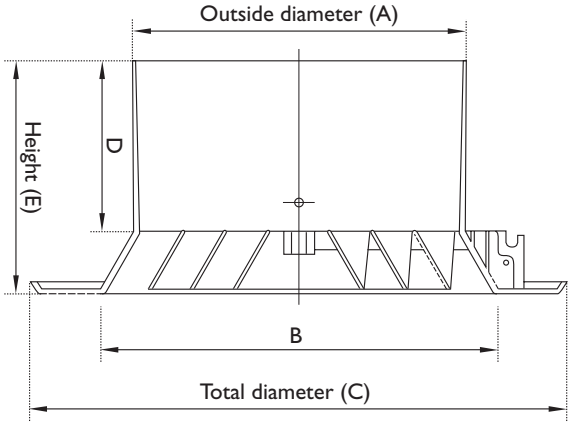
It is particularly efficient for rooms with higher ceilings and stairwells where a stronger more direct flow is required to get to the floor level and mix properly.

Features

- Flush mounting
- Easy clean non reflective white surface
- 2 sizes, 150mm & 200mm
- Fully adjustable flow from complete shut off to fully open
- Constructed from engineering grade plastic for long term strength and stability

Model PJD

Sizes Available/Dimensions					
Item #	A	B	C	D	E
235446	146	170	240	75	100
235447	195	225	290	95	120



Round Heritage Outlets

The Circular Heritage Outlet is a more decorative design that employs a unique three stage regulation from closed through partially open to full open so that airflow needs can be tailored for a wide variety of applications.

Round Heritage Outlet - Plastic

Sizes Available/Dimensions				
Item #	Nominal Neck Size		Face Size	
	mm	*inch*	*mm*	*inch*
231085	Ø 150	Ø 6”	Ø 240	Ø 9”
231086	Ø 200	Ø 8”	Ø 285	Ø 11”
231087	Ø 250	Ø 10”	Ø 340	Ø 13”
231088	Ø 300	Ø 12”	Ø 390	Ø 15”

Round Outlet - Multi Cone Diffusers

Round Ceiling Diffuser - Aluminium - Multi Cone Style

Sizes Available/Dimensions				
Item #	Nominal Neck Size		Face Size	
	mm	*inch*	*mm*	*inch*
245284	Ø 150	Ø 6”	Ø 320	Ø 13”
245285	Ø 200	Ø 8”	Ø 412	Ø 16”
245286	Ø 250	Ø 10”	Ø 480	Ø 19”
245287	Ø 300	Ø 12”	Ø 550	Ø 22”
245288	Ø 350	Ø 14”	Ø 595	Ø 24”

T-Bar

To Suit Eggcrate Grilles & Layin Diffusers

T-Bar

Description	
Model	Description
245700	TBAR METAL FRAME 602 X 602
245701	GRILLE METAL CEILING TBAR FRAME 600/300
245702	GRILLE METAL CEILING TBAR FRAME 1200/600

Square Ceiling Diffusers

Model LFD

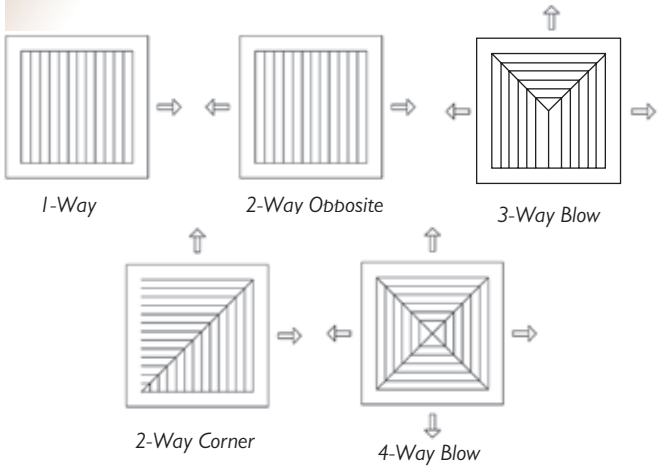
LFD type base is for flush mounting under a plaster ceiling or within a T-Bar ceiling.

APPLICATION:
This square ceiling diffuser is designed to achieve an even supply air distribution from any type of ceiling.

CONSTRUCTION:
Aluminium.

STANDARD FINISH:
Powder Coat White RAL9010

CORE PATTERNS:



FEATURES:

- Louvre faced ceiling diffusers are all aluminium including the frame, blades and centre core.
- LFD's are lightweight and will not rust or corrode under normal usage.
- Suitable for flush mounting under a plaster ceiling or lay-in T Bar ceiling grids.
- Removable core and safety chain makes them easy to install, clean & access dampers located behind diffusers.
- The LFD range is suitable for heating, cooling or ventilation in commercial and domestic applications.
- Diffuser ratings are based on mounting height being 2.8 metres.

  Throw range is defined by the minimum and maximum horizontal distances at right angles to the side of the diffuser.

Louvre Face Diffuser - Metal

Sizes Available/Dimensions					
Item #	Description	Nominal Neck Size		Face Size	
		mm	*inch*	*mm*	*inch*
247084	4 Way	150 x 150	6" x 6"	300 x 300	12" x 12"
247085	4 Way	225 x 225	9" x 9"	375 x 375	15" x 15"
247086	4 Way	300 x 300	12" x 12"	450 x 450	18" x 18"
247087	4 Way	375 x 375	15" x 15"	525 x 525	21" x 21"
247081	4 Way	450 x 450	18" x 18"	595 x 595	24" x 24"
247044	1 Way	450 x 450	18" x 18"	595 x 595	24" x 24"
247045	2 Way Cnr	450 x 450	18" x 18"	595 x 595	24" x 24"
247046	2 Way Opp	450 x 450	18" x 18"	595 x 595	24" x 24"
247080	3 Way	450 x 450	18" x 18"	595 x 595	24" x 24"

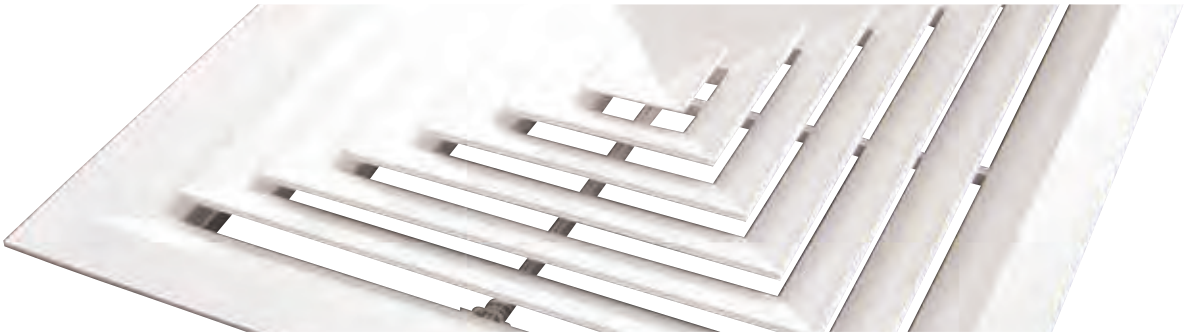
Louvre Face Diffuser - Metal - Kits

Sizes Available/Dimensions							
Item #	Description	Nominal Neck Size		Face Size		Spigot Size	
		mm	*inch*	*mm*	*inch*	*mm*	*inch*
248000	4 Way	450 x 450	18" x 18"	595 x 595	24" x 24"	150 x 150	6" x 6"
248001	4 Way	450 x 450	18" x 18"	595 x 595	24" x 24"	225 x 225	9" x 9"
248002	4 Way	450 x 450	18" x 18"	595 x 595	24" x 24"	300 x 300	12" x 12"
248003	4 Way	450 x 450	18" x 18"	595 x 595	24" x 24"	375 x 375	15" x 15"

Kits includes Grilles & Neck Adaptors

Square Ceiling Diffusers

Model LFD



NECK SIZE (mm)	Airflow (L/s)	Velocity (m/s)	STATIC PRESSURE DROP (Pa)	*NR (dB)*	Minimum Throw (m)	Maximum Throw (m)
225 x 225	100	2	15	<22	0.5	1.5
	150	3	35	28	1.4	3.2
300 x 300	150	1.7	12	<22	0.9	2.7
	200	2.2	19	23	1.4	3.3
	250	2.8	31	26	2.2	4.2
	300	3.3	42	31	2.8	4.6
375 x 375	250	1.8	13	<22	1.3	3.4
	300	2.1	18	<22	1.5	3.9
	350	2.5	26	28	1.7	4.6
	400	2.9	32	31	2.1	5
	450	3.2	39	35	2.7	5.2
450 x 450	350	1.7	12	25	1.2	3.8
	400	2	15	26	1.4	4.2
	450	2.2	20	29	2	4.8
	500	2.5	25	32	2.7	5.4
	550	2.7	30	33	3.1	5.8
	600	3.0	35	35	3.5	6.2

NOTE: The above sizes are based on a 4-way throw
3-way x Air Quantity x 0.75
2-way x Air Quantity x 0.50

Opposed Blade Dampers - Effect of Volume Control on Noise Levels

The additional noise level for diffusers with Opposed Blade Dampers installed is set out in the following table:

NR Addition for OBD		
Diffuser with OBD	Fully Open	50% Closed
NR 25 or less	1	5
NR 30	1	6
NR 35	2	8

Square Swirl Diffusers

Model PSA

Air volume, pressure loss and noise level

S/G: Installed inside of the ceiling with diffusing ring;
N/G: Installed inside of the ceiling without diffusing ring;
S/W: Hung with diffusing ring;
N/W: Hung without diffusing ring;

Model PSA - Quick Selection

Specs	Air volume m³/h	N/G		N/W		S/G		S/W	
		Pressure Loss (Pa)	Noise (dB)	Pressure Loss (Pa)	Noise (dB)	Pressure Loss (Pa)	Noise (dB)	Pressure Loss (Pa)	Noise (dB)
198	100	11	20	14	21	5.3	<20	6.2	<20
	125	16.5	26	21.5	27	8	<20	9.5	21
	150	25	32	31	34	12	24	14	25
	175	31	36	40	38	16	28	19	29
	200	40	39	54	41	21	33	26	34
	225	54	43	76	45	25	35	31	36
	250	64	46	81	48	32	38	39	39
	275	77	48	96	50	38	40	46	42
	300	-	-	-	-	49	43	60	45
	350	-	-	-	-	64	47	78	49
248	100	2	<20	4	<20	-	<20	-	<20
	150	10	<20	12	20	5	<20	6.5	<20
	175	13	23	14	24	6.5	<20	8.5	<20
	200	17	27	19	28	8.5	<20	12	20
	250	27	33	30	34	13	24	17	26
	300	39	39	45	40	19	29	26	32
	350	52	43	60	44	25	33	33	36
	400	64	47	78	48	35	37	44	40
	450	88	51	100	52	41	41	55	44
	500	-	-	-	-	49	43	60	46
313	200	3	<20	6	<20	-	<20	-	<20
	250	8	<20	9	<20	-	<20	6	<20
	300	12	26	13	27	6	<20	9.5	22
	350	16	30	17	31	8	23	12.5	26
	400	21	35	22	36	11	28	16	30
	500	34	42	36	43	16	34	25	37
	600	49	48	51	49	24	40	37	43
	700	69	54	72	55	32	44	48	47
	800	-	-	-	-	41	48	62	52
398	300	8	23	6	<20	4	<20	5	<20
	400	12	30	11	24	7	<20	7	<20
	500	20	35	16	30	11	25	11	26
	700	40	45	25	39	21	35	28	34
	900	71	54	55	47	35	42	47	45
	1200	121	69	95	68	58	48	70	53

Square Swirl Diffusers

Model PSB

Model PSB - Quick Selection

Specs	Air volume m^3/h	Pressure Loss (Pa)	Noise (dB)
254	100	6.5	<20
	150	13	24
	250	35	37
	400	90	53
	500	140	65
336	150	4.5	<20
	200	9	<20
	300	18	28
	400	36	38
	500	50	44
440	180	4.5	<20
	250	8	<20
	350	15	27
	550	38	42
	700	60	47
530	300	6	<20
	400	10	22
	600	20	32
	800	38	42
	1200	85	55

Model PSB - Air Return

Specs	Air volume m^3/h	Pressure Loss (Pa)	Noise (dB)
254	150	18	26
	200	35	33
	300	80	42
	400	145	55
336/440	200	8	22
	300	16	33
	400	30	42
	500	45	46
	700	80	55
530	200	5.5	<20
	300	13	20
	400	22	27
	500	35	35
	700	60	43

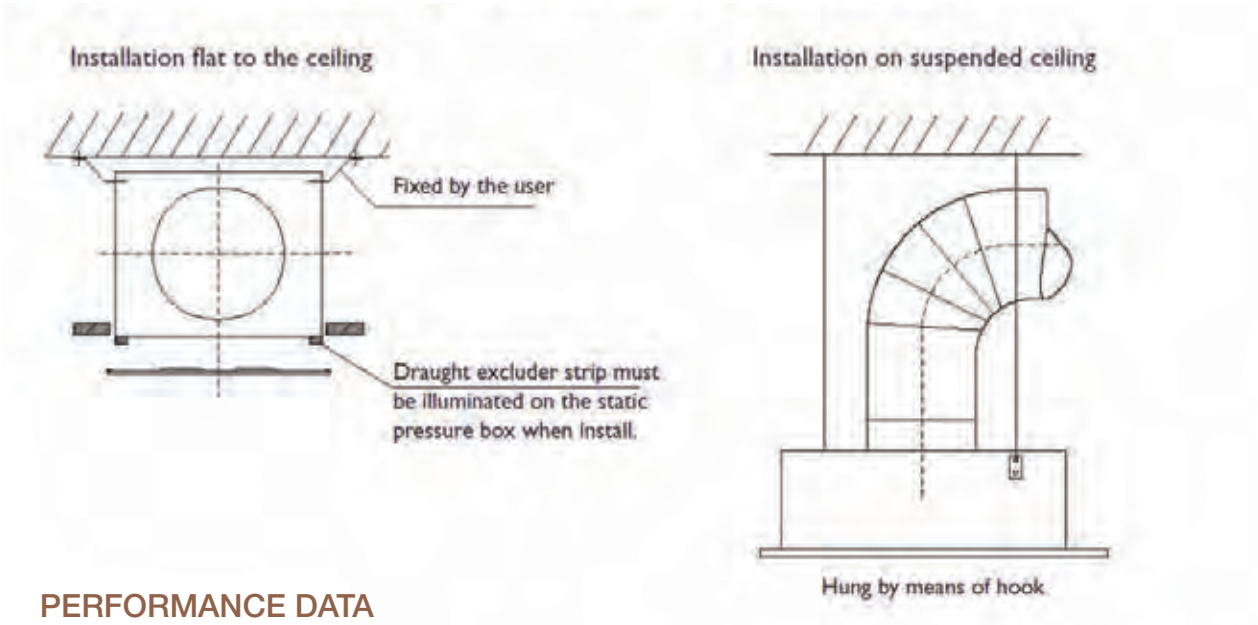
Square Swirl Diffusers

MODEL PSC

INSTALLATION

Installation flat to the ceiling is applicable to all types.

Min 2.6m from the bottom edge of the installation surface to the floor

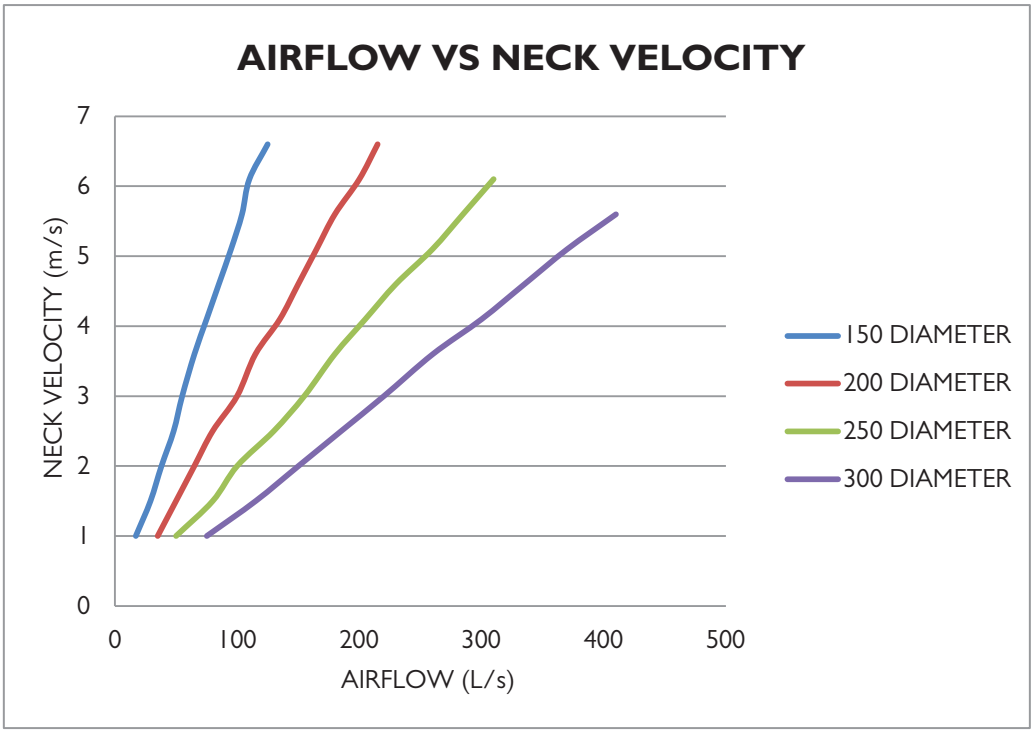


PERFORMANCE DATA

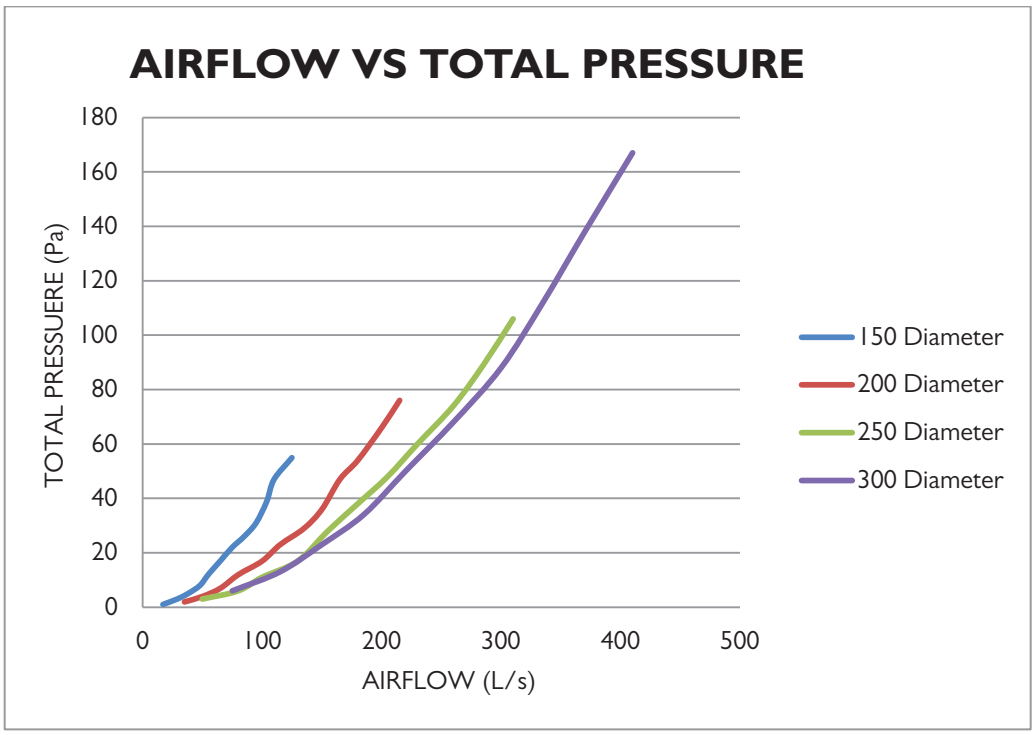
Notes:

1. Throw is calculated based on terminal velocity of 0.50 m/s.
2. The diameters represent the spigot diameter on the cushion head box.
3. Tests are conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
4. NC is based on 10dB room absorption evaluated between 125 to 500 Hz Octave bands.
5. All data shown are calculated for the diffuser Face/Neck - 595 mm / 535 mm.

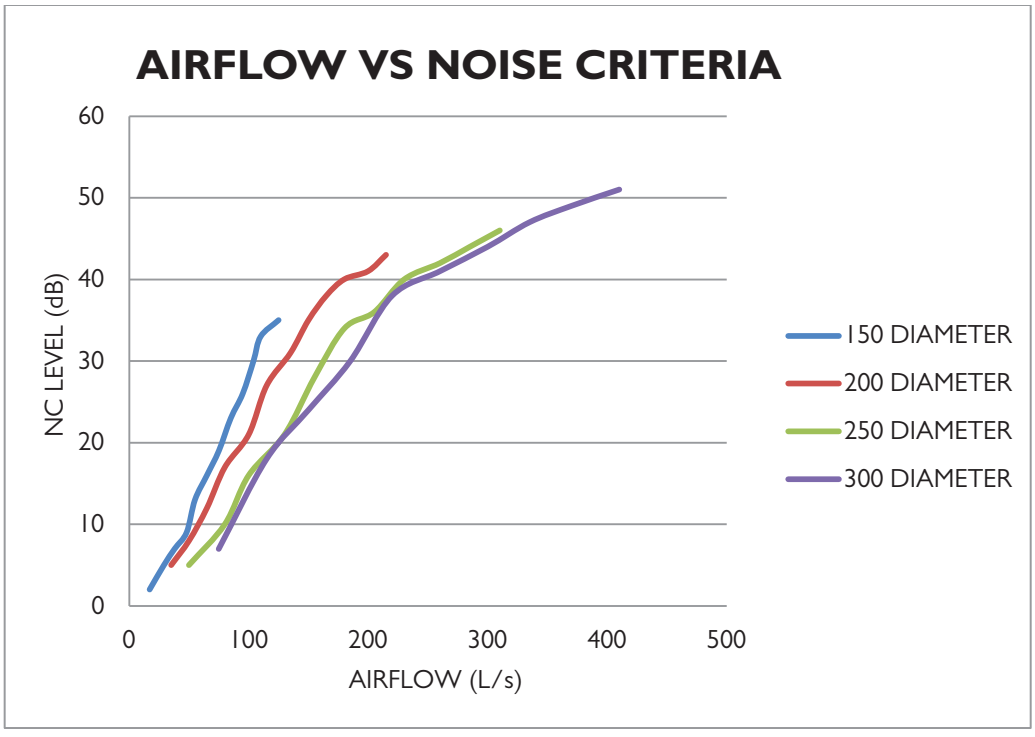
1. Airflow versus Neck Velocity



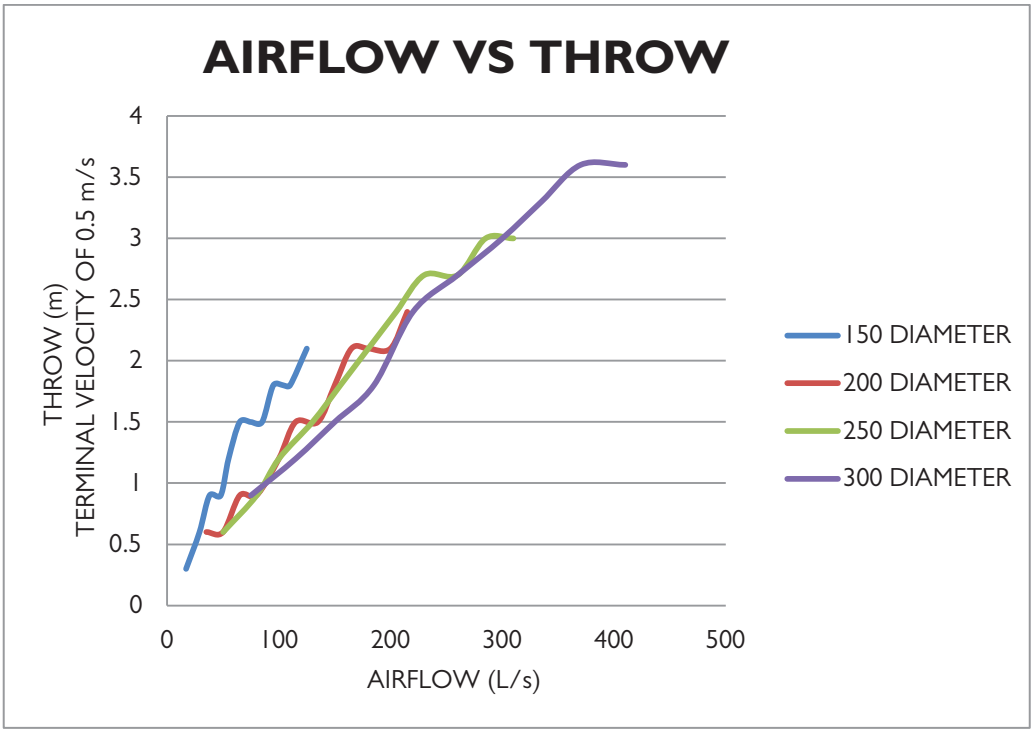
2. Airflow versus Total Pressure



3. Airflow versus Noise Criteria



4. Airflow versus Throw



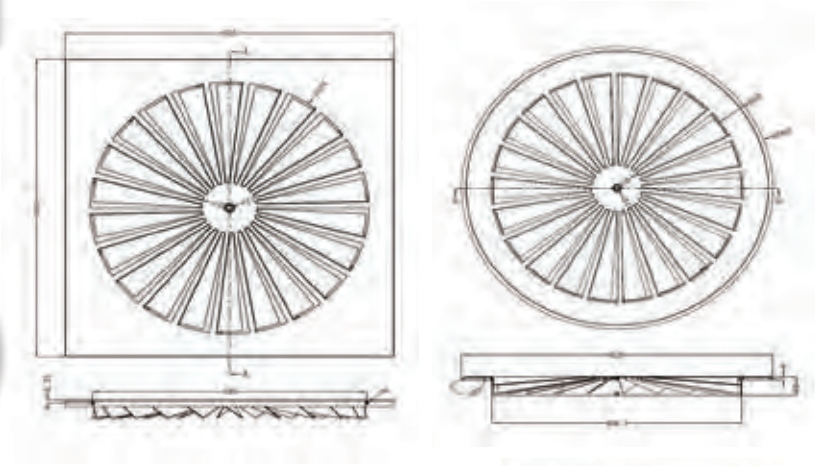
Square Swirl Diffusers High Volume

Model PSC-HV

The Polyaire PSC Hi-Volume Swirl Diffuser has fixed blades that create rotational as well as axial, tangential and radial air movement. This means that it produces a strong horizontal swirl, obtaining high induction levels, to allow the introduced flow to rapidly mix with the ambient air to reduce temperature and also perceived drafts or hot/cold spots.

The Polyaire PSC High Volume Swirl Diffuser is suitable for Low Temperature VAV Systems with a supply air temperature range of -15K to +10K. The standard PSC is made of cold rolled galvanized plate steel powder coated white (RAL9010).

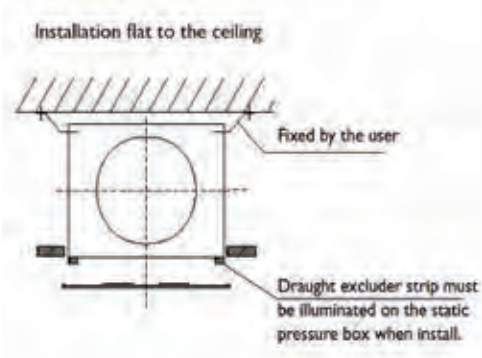
The face plate is 595 square and is suitable for surface mounting in the ceiling or alternatively as a layin for T-Bar ceiling installations. A 600mm dia Round Version is also available upon request

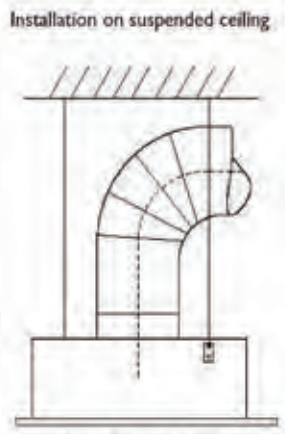


INSTALLATION DETAILS

Installation flat to the ceiling is applicable to all types.

Min. 26m from the bottom edge of the installation surface to the floor





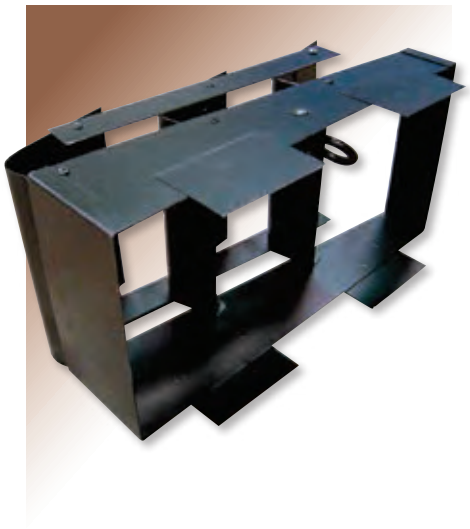
Performance Data

SPIGOT SIZE (mm)	Airflow (l/s)	100	125	150	175	200	250	300	350
200	Static Press (Pa)	2	3	6	-	-	-	-	-
	Throw (m)	1.4/0.6/0.3	1.7/0.9/0.4	2.3/1.1/0.8	-	-	-	-	-
	dB	<15	15	24	-	-	-	-	-
250	Static Press (Pa)	1	2	5	6	12	-	-	-
	Throw (m)	1.4/0.6/0.3	1.6/0.9/0.4	2.1/1.0/0.6	2.3/1.1/0.8	3.5/1.6/1.0	-	-	-
	dB	<15	<15	20	23	28	-	-	-
300	Static Press (Pa)	1	1	2	3	8	13	18	-
	Throw (m)	1.0/0.4/0.2	1.5/0.8/0.3	1.6/0.9/0.4	1.7/0.9/0.4	2.7/1.3/0.8	3.7/1.8/1.2	4.0/2.0/1.3	-
	dB	<15	<15	<15	15	25	32	37	-
350	Static Press (Pa)	-	-	-	-	13	17	20	25
	Throw (m)	-	-	-	-	3.6/1.7/1.1	4.0/2.0	3.9/1.9/1.2	4.7/2.3/1.5
	dB	-	-	-	-	31	37	39	41

Throws are based on Terminal Velocities of 0.25, 0.50 & 0.75

Stream Splitter Dampers

Model SSD



Polyaire Model SSD Stream Splitter Dampers are commonly used as a volume control device in supply air systems.

Stream Splitter dampers are mounted directly behind the supply air grille and provide the ability to be manually adjusted through the face of the Grille or Register. Construction is from Steel with a matt black finish.

Model SSD Stream Splitter Dampers are manufactured to order in a wide range of sizes.