

# PLF

- > Louvre Face Diffuser
- > High Capacity
- > Spread Pattern Options

## DESCRIPTION

A high capacity louvred face directional diffuser that can supply large volumes of air at relatively low sound levels and pressure drops. Available with a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement.

## CONSTRUCTION

Extruded aluminium.

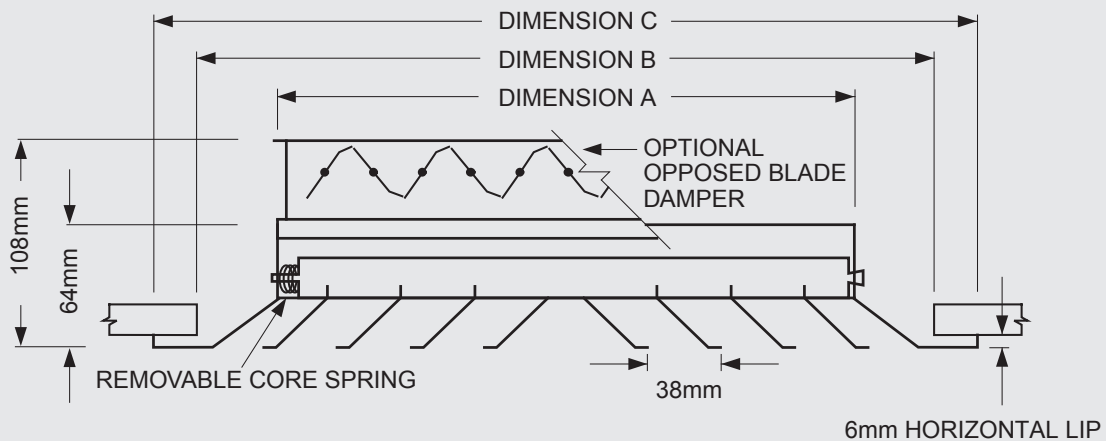
**Finish:**

White polyester powder finish RAL 9010 semi-gloss as standard. *Other finishes available.*

## MODELS

- PLF:** Fixed Pattern Variable Sizes
- PLF-S:** Surface Mount Frame
- PLF-L:** Lay-In T-Bar Frame
- PLF-SP:** Spline Frame

PLF – Louvre Face Diffuser



DIMENSIONS (mm)			
Nominal Unit Size	Actual Neck 'A'	Minimum Opening 'B'	Overall Flanges 'C'
150 x 150	146 x 146	228 x 228	290 x 290
225 x 225	223 x 223	305 x 305	367 x 367
300 x 300	299 x 299	381 x 381	443 x 443
375 x 375	375 x 375	457 x 457	519 x 519
450 x 450	451 x 451	533 x 533	595 x 595

## NOTES



**Available Sizes:**



Unit size is determined by duct dimensions.  
Diffuser necks are under sized to suit ductwork.  
Duct Sizes are available in 75 mm increments.





**Minimum size:**






150 mm x 150 mm square neck.  
225 mm x 150 mm rectangular neck.




# PLF – CORE STYLES

1-WAY	Size (mm)		
	Core	Min	Max
	1A	225 x 150	900 x 835
	1B		

2-WAY	Size (mm)		
	Core	Min	Max
	2A	225 x 150	900 x 835
	2B		

2-WAY CORNER	Size (mm)		
	Core	Min	Max
	2C	225 x 150	900 x 835
	2D		
	2E		
	2F		

3-WAY	Size (mm)		
	Core	Min	Max
	3A1 A > B	225 x 150	900 x 825
	3A2 B < A B > A/2		
	3B B = A/2	300 x 150	900 x 450
	3C	225 x 150	900 x 825
	3E B < A/2	375 x 150	900 x 375

4-WAY	Size (mm)		
	Core	Min	Max
	4B	225 x 150	900 x 825
	4C	300 x 150	900 x 750
	4E	375 x 150	900 x 675

## RETURN SELECTION DATA

		4-Way																
		0.015	0.020	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400	0.500	
Size	150 x 150	Pa	1	3	5	6	10	15	22									
		dB(A)	-	-	-	-	-	12	18									
	225 x 225	Pa			1	1	2	3	4	6	9							
		dB(A)			-	-	-	-	-	-	-							
	300 x 300	Pa					1	2	2	3	7	11	18					
		dB(A)					-	-	-	-	-	14	23					
	375 x 375	Pa						1	2	4	8	12	24					
		dB(A)						-	-	-	10	17	23					
	450 x 450	Pa								2	4	6	9	15	22	36	63	98
		dB(A)								-	-	-	10	17	22	28	33	40

## KEY INFORMATION

Throw based on diffuser installed in a standard dropped ceiling.

Pa = Static Pressure Drop

dB(A) = Sound Pressure Level

*Supply data over the page.*

## PLF – SELECTION DATA

SUPPLY SELECTION DATA														
4-Way														
Air Volume (m³/s)	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400	
Size	150 x 150	T	1.1	1.3	1.5	1.6	1.9	2.3	2.9					
		Pa	4	6	8	15	24	33	55					
		dB(A)	-	-	23	26	32	38	44					
	225 x 225	T		1.2	1.3	1.4	1.8	2.1	2.7	3.2	4.4			
		Pa		2	4	6	10	13	21	32	55			
		dB(A)		-	12	17	20	26	32	37	43			
	300 x 300	T					1.5	1.9	2.5	2.9	3.6	4.3	5.2	
		Pa					2	3	5	8	14	19	31	
		dB(A)					-	-	19	22	31	37	42	
	375 x 375	T							2.2	2.6	3.1	3.8	4.5	5.6
		Pa							4	5	10	14	24	35
		dB(A)							-	18	22	30	35	43
450 x 450	T									2.6	3.2	3.9	5.2	
	Pa									6	8	10	24	
	dB(A)									20	23	28	35	

2-Way Opposite														
Air Volume (m³/s)	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400	
Size	150 x 150	T	1.5	1.7	1.9	2.2	2.5	3.1	3.8					
		Pa	5	7	12	16	30	38	64					
		dB(A)	-	-	25	23	32	38	45					
	225 x 225	T		1.6	1.7	1.8	2.3	2.5	3.5	4.2	5.6			
		Pa		3	5	7	10	17	27	38	68			
		dB(A)		-	14	19	20	27	32	40	46			
	300 x 300	T					2	2.6	3.3	3.8	4.8	5.7	6.7	
		Pa					3	5	8	12	21	29	46	
		dB(A)					-	15	20	22	32	37	42	
	375 x 375	T							2.9	3.4	4.3	6.2	5.9	7.6
		Pa							3	7	12	17	25	40
		dB(A)							15	20	26	32	33	45
450 x 450	T									3.4	4.3	5.1	6.7	
	Pa									7	12	14	27	
	dB(A)									20	24	30	39	

1-Way														
Air Volume (m³/s)	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400	
Size	150 x 150	T	2.4	2.6	3.1	3.4	3.6	4.8	6					
		Pa	6	8	15	20	35	40	73					
		dB(A)	-	-	28	31	33	41	47					
	225 x 225	T		2.4	2.6	3.0	3.6	4.5	5.6	6.7	8.8			
		Pa		4	6	8	14	21	32	46	84			
		dB(A)		-	18	23	24	29	34	39	47			
	300 x 300	T					3.2	4.2	5.1	5.8	7.3	8.7	10	
		Pa					4	5	9	12	21	32	46	
		dB(A)					-	17	22	26	36	39	45	
	375 x 375	T							4.5	5.2	6.5	7.8	9.1	11.1
		Pa							5	7	14	19	27	45
		dB(A)							16	21	28	31	38	44
450 x 450	T									5.4	6.8	8.1	10.8	
	Pa									8	12	17	30	
	dB(A)									22	27	32	33	

SUPPLY SELECTION DATA															
3-Way															
Air Volume (m³/s)	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400		
Size	150 x 150	T(A)	1.3	1.4	1.6	1.9	2.3	2.6	3.3						
		T(B)	1.2	1.2	1.4	1.6	1.9	2.3	2.8						
		Pa	4	6	10	14	24	33	55						
	225 x 225	T(A)			1.3	1.5	1.6	2.1	2.4	3.0	3.7	4.8			
		T(B)			1.2	1.2	1.3	1.7	2.1	2.6	3.2	4.2			
		Pa			3	5	7	10	14	25	37	65			
	300 x 300	T(A)						1.7	2.0	2.7	3.2	4.0	4.8	5.4	
		T(B)						1.5	1.9	2.4	2.8	3.6	4.3	4.9	
		Pa						2	4	7	10	17	26	35	
	375 x 375	T(A)								2.5	2.8	3.6	4.3	4.9	6.1
		T(B)								2.2	2.5	3.2	3.8	4.5	5.6
		Pa								4	6	8	16	23	38
450 x 450	T(A)									3.0	3.7	4.4	6.1		
	T(B)									2.6	3.3	3.9	5.2		
	Ps									6	9	13	26		
dB(A)										19	24	28	36		

2-Way Corner															
Air Volume (m³/s)	0.025	0.030	0.040	0.050	0.060	0.080	0.100	0.125	0.150	0.200	0.250	0.300	0.400		
Size	150 x 150	T	1.4	1.7	1.9	2.2	2.5	3.0	3.9						
		Pa	5	6	12	16	28	35	58						
		dB(A)	-	-	26	26	31	40	45						
	225 x 225	T		1.6	1.7	1.8	2.3	2.9	3.5	4.2	5.5				
		Pa		3	5	7	12	16	28	40	70				
		dB(A)		-	16	20	22	27	33	38	45				
	300 x 300	T						2.1	2.6	3.3	3.8	4.8	5.7	6.6	
		Pa						3	4	6	11	16	24	35	
		dB(A)						-	15	20	24	32	35	44	
	375 x 375	T								2.9	3.4	4.3	5.1	5.9	7.4
		Pa								4	6	12	17	22	40
		dB(A)								12	18	23	32	35	44
450 x 450	T									3.4	4.3	5.2	6.8		
	Pa									6	10	16	30		
	dB(A)									20	24	29	36		

### KEY INFORMATION

Throw based on diffuser installed in a standard suspended ceiling.

T = Throw in metres (m)

Pa = Static Pressure Drop

dB(A) = Sound Pressure Level