

Louvered Face Diffusers

DF / MD / DE / DFA

Introduction

The Waterloo Multicone D Series Diffuser, constructed from aluminium alloy extrusions with mitred and welded/cleated frames, are ideal for most commercial projects requiring high quality diffusers for integration with a variety of ceiling types. The range is available with 5 frame styles and 14 different air pattern control core designs for vertical and horizontal diffusion.

Product Description

- DF/MD** Flanged horizontal blow diffuser
- DF-T8** 8mm drop tegular tile replacement
- DF-T16** 16mm drop tegular tile replacement
- DE** Recessed frame horizontal blow diffuser
- DFA** Flanged adjustable diffuser for horizontal or vertical projection (4 way only)
- OBSS** Opposed blade damper
- OBLL** Lever operated damper via the diffuser face
- PBD** Plenum box
- NR/D** Top entry neck reducer

Features

- Five frame styles for integration with most ceilings
- 14 core styles to suit required air pattern
- Lightweight aluminium construction
- Fixed or adjustable patterns
- Suits 300, 500, 600 & 1200 ceiling grid systems

Finishes

- PPG9010 (RAL 9010 Gloss - 80% Gloss White)
- PPM9010 (RAL 9010 Matt - 20% Gloss White)
- PPM9006 (RAL 9006 Matt - 30% Gloss Silver)
- Other colours available on request

Weights

- DF/MD/DE/DFA 12.5kg/m² face area
- OBSS/ED 9.5kg/m² face area

Sizes

- Series DF/DE Minimum size - 150 x 150 duct size
Maximum size - 1200 x 600 duct size
- Series DF-T8/T16 Minimum size - 375 x 375 duct size (500mm tile replacement)
Maximum size - 450 x 450 duct size (600mm tile replacement)
- Series DFA Minimum size - 150 x 150 duct size
Maximum size - 600 x 600 duct size

Standard increments of 75mm only

Selection Criteria

Ceiling height 2.7m.
Temperature differential -10K
Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF11/300x300

- Air flow rate 225 l/s
- Throw 4.5 - 8.5 m
- Total Pressure Loss 23 Pa
- Noise level 35 dBA

Exhaust & OBSS corrections		
Supply diffuser	0dB	Pa x 1.0
Supply diffuser + OBSS	+ 3dB	Pa x 1.0
Exhaust diffuser	+ 3dB	Pa x 1.1
Exhaust diffuser + OBSS	+13dB	Pa x 1.15

ORDER EXAMPLE

DF-41/300/300/PPM9010/OBSS

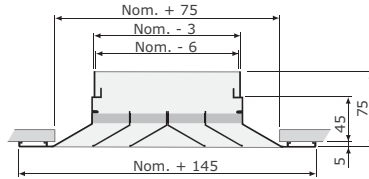
Type _____

Duct width _____

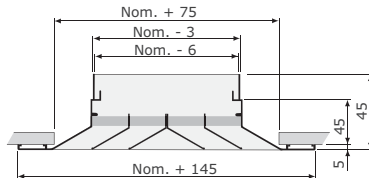
Duct height _____

Finish _____

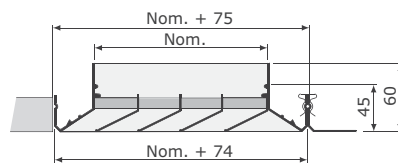
Damper _____



DF Typical lay-in grid



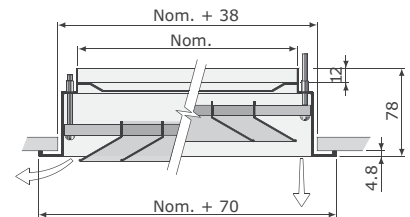
MD Typical lay-in grid



DE Typical clip in grid

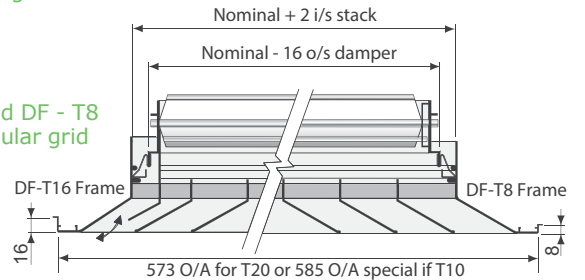


DF



DFA

DF - T16 and DF - T8 Typical tegular grid



- OBLL damper
Lever operation at diffuser face.
Suitable for core 41 only
- OBSS damper
Operated by screwdriver after removing core. Suitable for all types

DF / DE	Core 41							
	Supply		Core 41					
Total pressure drop (Pa)	150	225	300	375	450	525	600	
	x 150	x 225	x 300	x 375	x 450	x 525	x 600	
9	I/s	34	76	135	211	304	413	540
	Min Max (m)	1.0-1.5	1.0-2.0	1.5-2.5	2.0-3.5	2.0-4.0	2.5-5.0	2.5-5.5
	L _w	-	-	-	-	23	24	25
15	I/s	45	101	180	282	405	551	720
	Min Max (m)	1.0-2.0	1.5-2.5	2.0-3.5	2.0-4.5	2.5-5.0	3.0-6.0	3.5-7.0
	L _w	-	24	27	28	30	31	32
23	I/s	56	127	225	352	506	689	900
	Min Max (m)	1.5-2.5	2.0-3.5	2.0-4.5	2.5-5.5	3.5-6.5	4.0-8.0	4.5-8.5
	L _w	26	30	33	34	36	37	38
33	I/s	68	152	270	422	608	827	1080
	Min Max (m)	1.5-3.0	2.0-4.0	2.5-5.0	3.5-6.5	4.0-8.0	4.5-9.0	5.0-10.5
	L _w	31	35	38	39	41	42	43
43	I/s	79	177	315	492	709	964	1260
	Min Max (m)	2.0-3.5	2.0-4.5	3.0-6.0	4.0-7.5	4.5-9.0	5.0-10.5	6.0-12.0
	L _w	35	39	42	43	45	46	47

Louvred Face Diffusers

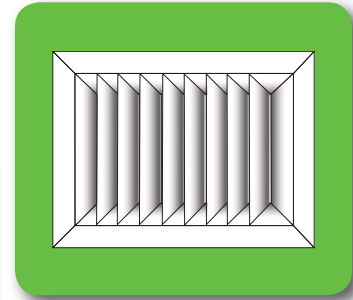
DF / DE core 12 / 13

Selection Criteria

Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.



Selection Example DF12/450x150

Air flow rate 169 l/s
 Throw 4.0 - 8.0 m
 Total Pressure Loss 23 Pa
 Noise level 34 dBA



Exhaust & OBSS corrections		
Supply diffuser	0dB	Pa x 1.0
Supply diffuser + OBSS	+ 3dB	Pa x 1.0
Exhaust diffuser	+ 3dB	Pa x 1.1
Exhaust diffuser + OBSS	+13dB	Pa x 1.15

Performance Table

DF / DE		Core 12 			Core 13 							
Supply												
Total pressure drop (Pa)		225 x 150	300 x 150	375 x 150	450 x 150	525 x 150	600 x 150	300 x 225	375 x 225	450 x 225	525 x 225	600 x 225
9	l/s	51	67	84	101	118	135	101	127	153	177	203
core 12	Min - Max (m)	2.0-3.5	2.5-4.0	2.5-4.5	3.0-5.0	3.5-5.5	4.0-6.0	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	4.5-8.0
core 13	Min - Max (m)	2.0-3.5	2.0-3.5	2.0-4.0	2.5-5.0	3.0-5.5	4.0-6.0	2.5-5.0	2.5-5.5	3.0-6.0	3.5-6.5	4.0-7.0
	L _w	-	-	-	20	21	22	20	20	21	23	25
15	l/s	68	90	113	135	158	180	135	169	203	237	271
core 12	Min - Max (m)	2.0-4.5	2.5-5.0	2.7-6.0	3.0-7.0	3.5-7.5	4.0-8.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-8.0	5.0-9.0
core 13	Min - Max (m)	2.0-4.5	2.5-5.0	2.5-6.0	3.0-6.0	3.5-7.0	4.5-9.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-8.0	5.0-9.0
	L _w	24	27	27	28	29	30	28	28	29	30	31
23	l/s	84	113	140	169	197	225	169	211	253	295	337
core 12	Min - Max (m)	2.5-5.5	3.0-6.0	3.5-7.0	4.0-8.0	4.5-9.0	5.0-10.0	4.0-8.0	4.5-8.5	5.0-9.0	5.5-10.0	6.0-12.0
core 13	Min - Max (m)	2.5-5.5	3.0-6.0	3.5-6.5	4.0-7.5	4.5-8.0	5.0-10.0	4.0-7.5	4.5-8.5	5.0-10.0	5.5-11.0	6.0-12.0
	L _w	30	33	33	34	35	36	33	34	35	36	37
33	l/s	101	135	169	202	236	270	202	253	303	354	404
core 12	Min - Max (m)	3.5-6.5	4.0-7.0	4.5-8.5	5.0-10.0	5.5-10.5	6.0-11.0	4.5-9.0	5.0-9.5	5.5-10.0	6.0-12.0	7.0-14.0
core 13	Min - Max (m)	3.5-6.5	4.0-7.5	4.0-8.0	4.5-9.0	5.0-11.0	6.0-12.0	4.5-9.0	5.0-10.0	5.5-11.0	6.0-12.0	7.0-14.0
	L _w	35	38	38	39	40	41	38	39	40	41	42
43	l/s	118	158	197	236	275	315	236	295	354	413	472
core 12	Min - Max (m)	4.0-7.5	4.5-8.0	5.5-10.0	6.0-11.0	6.5-12.0	7.0-13.0	5.0-10.5	5.5-11.0	6.0-11.5	7.0-15.0	8.0-16.0
core 13	Min - Max (m)	4.0-7.5	4.5-8.5	5.0-10.0	5.0-10.5	6.0-12.0	7.0-15.0	5.0-10.5	6.0-12.0	6.5-13.0	7.0-14.0	8.0-16.0
	L _w	39	42	42	43	44	46	43	43	44	45	46

Total pressure drop (Pa)		375 x 300	450 x 300	525 x 300	600 x 300	450 x 375	525 x 375	600 x 375	525 x 450	600 x 450	600 x 525
9	l/s	169	203	236	271	253	296	339	354	406	474
core 12	Min - Max (m)	2.5-6.0	3.0-6.5	3.5-7.0	4.0-8.0	3.0-6.5	3.5-7.0	4.0-8.0	3.0-7.0	4.0-8.0	3.0-8.5
core 13	Min - Max (m)	2.5-6.0	3.5-6.5	4.0-7.0	4.5-7.5	3.0-6.5	3.5-7.0	4.0-7.5	3.5-7.5	4.0-8.0	3.0-8.5
	L _w	21	23	24	25	23	24	25	24	25	26
15	l/s	225	270	315	360	338	394	450	472	540	629
core 12	Min - Max (m)	4.0-8.0	4.5-9.0	5.0-10.0	6.0-11.0	4.5-9.0	5.0-10.0	6.0-11.0	5.0-9.5	6.0-11.0	6.0-11.0
core 13	Min - Max (m)	4.0-8.0	4.5-8.5	5.0-9.0	5.5-10.0	4.5-9.0	5.0-10.0	5.5-11.0	5.0-10.0	6.0-11.0	6.0-11.0
	L _w	29	30	32	33	30	31	33	31	32	33
23	l/s	281	338	394	441	422	492	562	591	675	785
core 12	Min - Max (m)	5.0-10.0	5.5-11.0	6.0-12.0	7.0-13.0	5.5-11.0	6.0-12.0	7.0-13.0	6.0-12.0	7.0-13.0	7.0-14.0
core 13	Min - Max (m)	5.0-10.0	5.0-10.5	5.5-11.5	6.0-12.0	5.5-11.0	6.0-12.0	6.5-13.0	6.5-12.5	7.0-13.0	7.0-14.0
	L _w	35	37	38	39	36	37	38	37	38	40
33	l/s	338	405	473	540	506	591	674	709	810	942
core 12	Min - Max (m)	6.0-12.0	6.5-13.0	7.0-15.0	8.0-16.0	6.5-13.0	7.0-14.0	8.0-16.0	7.0-14.5	8.0-16.0	9.0-18.0
core 13	Min - Max (m)	6.0-11.5	6.5-13.0	7.0-14.0	7.5-15.0	6.5-13.0	7.0-14.0	7.5-15.0	7.5-15.0	8.0-16.0	8.5-17.5
	L _w	40	41	42	44	41	42	44	42	43	45
43	l/s	394	473	551	630	590	689	788	827	945	1103
core 12	Min - Max (m)	7.0-13.5	7.5-15.0	8.0-16.0	9.0-18.0	7.5-15.0	8.0-16.0	9.0-18.0	8.5-16.0	9.0-18.0	10.0-20.0
core 13	Min - Max (m)	7.0-13.5	7.5-15.0	8.0-16.0	9.0-18.0	7.5-15.0	8.0-16.0	9.0-17.0	9.0-16.5	9.5-18.0	10.0-20.0
	L _w	44	45	46	47	45	46	47	46	47	49

Louvred Face Diffusers

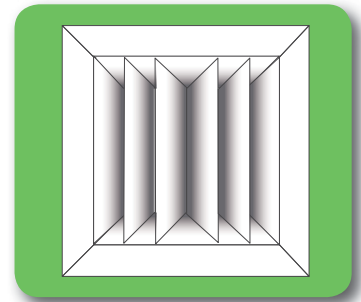
DF / DE core 21 / 25

Selection Criteria


Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF21/300x300

Air flow rate 225 l/s
 Throw 3.0 - 6.0 m
 Total Pressure Loss 23 Pa
 Noise level 34 dBA

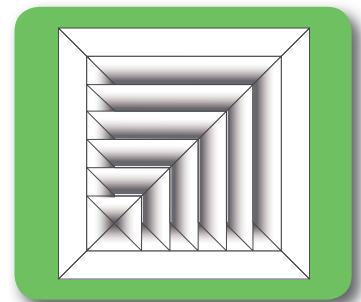


Performance Table


DF / DE		Core 21 						
Supply								
Total pressure drop (Pa)		150	225	300	375	450	525	600
		x 150	x 225	x 300	x 375	x 450	x 525	x 600
9	I/s	34	76	135	211	304	413	540
	Min Max (m)	1.0-2.0	1.5-2.5	2.0-3.5	2.5-4.5	2.5-6.0	3.0-6.5	3.5-7.0
	L _w	-	-	-	23	24	26	28
15	I/s	45	101	180	282	405	551	720
	Min Max (m)	1.0-2.5	2.0-3.5	2.5-5.0	3.0-6.0	3.5-7.5	4.0-8.0	4.5-8.5
	L _w	-	25	28	30	31	33	35
23	I/s	56	127	225	352	506	689	900
	Min Max (m)	1.5-3.0	2.5-5.0	3.0-6.0	4.0-7.5	4.5-9.0	5.0-10.0	5.5-10.5
	L _w	27	31	34	36	37	39	41
33	I/s	68	152	270	422	608	827	1080
	Min Max (m)	2.0-3.5	2.5-5.5	3.5-7.5	5.0-9.5	5.5-11.0	6.5-13.0	6.5-13.0
	L _w	32	36	39	41	42	43	45
43	I/s	79	177	315	492	709	964	1260
	Min Max (m)	2.0-4.5	3.0-6.0	4.5-8.5	5.5-11.0	6.5-13.0	7.5-15.0	7.5-15.0
	L _w	36	40	43	45	46	48	49

Selection Example DF25/300x300

Air flow rate 225 l/s
 Throw 3.0 - 6.0 m
 Total Pressure Loss 23 Pa
 Noise level 34 dBA



Performance Table

DF / DE		Core 25 						
Supply								
Total pressure drop (Pa)		150	225	300	375	450	525	600
		x 150	x 225	x 300	x 375	x 450	x 525	x 600
9	I/s	34	76	135	211	304	413	540
	Min Max (m)	1.0-2.0	1.5-2.5	2.0-3.5	2.5-4.5	2.5-6.0	3.0-6.5	3.0-7.0
	L _w	-	-	20	23	24	25	26
15	I/s	45	101	180	282	405	551	720
	Min Max (m)	1.0-2.5	2.0-3.5	2.5-5.0	3.0-6.0	3.5-7.5	4.0-8.0	4.0-9.0
	L _w	-	25	28	30	31	32	33
23	I/s	56	127	225	352	506	689	900
	Min Max (m)	1.5-3.0	2.5-5.0	3.0-6.0	4.0-7.5	4.5-9.0	5.0-10.0	5.0-11.0
	L _w	27	31	34	36	37	38	39
33	I/s	68	152	270	422	608	827	1080
	Min Max (m)	2.0-3.5	2.5-5.5	3.5-7.5	5.0-9.5	5.5-11.0	6.0-12.0	6.0-13.0
	L _w	32	36	39	41	42	43	44
43	I/s	79	177	315	492	709	964	1260
	Min Max (m)	2.0-4.5	3.0-6.0	4.5-8.5	5.5-11.0	6.5-13.0	7.0-14.0	7.0-15.0
	L _w	36	40	43	45	46	47	48

Louvred Face Diffusers

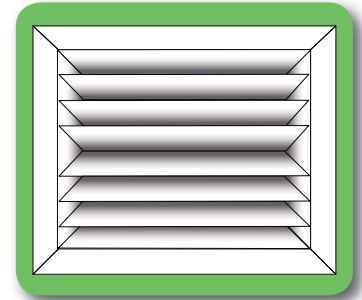
DF / DE core 22 / 23

Selection Criteria

Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF22/450x150

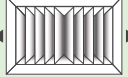

Air flow rate 169 l/s
 Throw 3.0 - 5.5 m
 Total Pressure Loss 23 Pa
 Noise level 33 dBA



DF - core 23

Exhaust & OBSS corrections		
Supply diffuser	0dB	Pa x 1.0
Supply diffuser + OBSS	+ 3dB	Pa x 1.0
Exhaust diffuser	+ 3dB	Pa x 1.1
Exhaust diffuser + OBSS	+13dB	Pa x 1.15

Performance Table

DF / DE		Core 22 					Core 23 						
Supply													
Total pressure drop (Pa)		225 x 150	300 x 150	375 x 150	450 x 150	525 x 150	600 x 150	300 x 225	375 x 225	450 x 225	525 x 225	600 x 225	
9	l/s	51	67	84	101	118	135	101	127	153	177	203	
core 22	Min - Max (m)	1.0-2.5	1.5-2.5	1.5-3.0	2.0-3.0	2.5-3.5	3.0-4.0	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	3.5-5.0	
core 23	Min - Max (m)	1.0-2.5	1.5-2.5	1.5-3.0	2.0-3.5	2.5-4.0	3.0-5.0	2.0-3.5	2.0-4.0	2.5-4.0	3.0-4.5	3.5-5.0	
	L _w	-	-	-	-	20	21	-	-	20	21	22	
15	l/s	68	90	113	135	158	180	135	169	203	237	271	
core 22	Min - Max (m)	1.5-3.0	2.0-3.5	2.5-4.0	3.0-4.5	3.5-5.0	4.0-5.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	4.0-6.5	
core 23	Min - Max (m)	1.5-3.0	2.0-3.5	2.0-4.0	2.5-4.5	3.0-5.0	3.5-6.0	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	
	L _w	23	25	26	27	28	29	27	28	28	29	30	
23	l/s	84	113	140	169	197	225	169	211	253	295	337	
core 22	Min - Max (m)	2.0-3.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-8.0	
core 23	Min - Max (m)	2.0-3.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	2.5-5.5	3.0-6.0	3.5-6.5	3.5-7.5	4.5-9.0	
	L _w	29	31	32	33	34	35	33	34	34	35	36	
33	l/s	101	135	169	202	236	270	202	253	303	354	404	
core 22	Min - Max (m)	2.0-4.5	2.5-5.0	3.0-5.0	3.5-6.0	4.0-6.5	4.5-8.0	3.5-6.5	3.5-7.5	4.0-8.0	4.5-9.0	5.0-10.0	
core 23	Min - Max (m)	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-8.0	3.5-6.5	3.5-7.5	4.0-8.0	4.5-8.5	5.5-11.0	
	L _w	34	36	37	38	39	40	38	39	39	41	42	
43	l/s	118	158	197	236	275	315	236	295	354	413	472	
core 22	Min - Max (m)	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-8.0	5.0-9.0	4.0-7.5	4.5-8.5	5.0-9.0	5.5-10.0	6.0-11.0	
core 23	Min - Max (m)	2.5-5.0	3.0-6.0	3.5-7.0	4.0-7.5	4.5-8.0	5.0-9.0	4.0-7.5	4.0-8.5	5.0-9.0	5.0-10.0	7.0-13.0	
	L _w	38	40	41	42	43	44	42	43	43	45	46	

Total pressure drop (Pa)		375 x 300	450 x 300	525 x 300	600 x 300	450 x 375	525 x 375	600 x 375	525 x 450	600 x 450	600 x 525
9	l/s	169	203	236	271	253	296	339	354	406	474
core 22	Min - Max (m)	2.0-4.0	2.5-4.5	3.5-5.0	3.5-5.5	2.5-5.0	3.0-5.5	3.5-6.0	2.5-5.0	3.0-5.5	4.0-6.0
core 23	Min - Max (m)	2.0-4.0	2.0-4.5	2.5-5.0	3.0-6.0	2.5-5.0	3.0-6.0	3.5-6.5	2.5-5.0	3.0-5.5	3.0-5.5
	L _w	21	23	24	25	23	24	25	24	25	26
15	l/s	225	270	315	360	338	394	450	472	540	629
core 22	Min - Max (m)	2.5-5.5	3.0-6.0	3.5-6.5	4.0-7.0	3.0-6.5	3.5-7.0	4.0-8.0	3.0-6.5	4.0-7.0	5.0-8.0
core 23	Min - Max (m)	2.5-6.0	3.0-6.0	3.5-6.5	4.0-7.0	3.5-6.5	4.0-7.0	4.5-8.0	3.0-6.5	3.5-7.0	4.0-8.0
	L _w	29	30	32	33	30	31	33	31	32	33
23	l/s	281	338	394	441	422	492	562	591	675	785
core 22	Min - Max (m)	3.5-7.0	4.0-7.5	4.5-8.0	5.0-9.0	4.0-8.5	4.5-9.0	5.0-10.0	4.0-8.5	5.0-9.0	5.5-10.0
core 23	Min - Max (m)	3.5-7.0	4.0-8.0	4.5-9.0	5.0-10.0	4.5-8.5	5.0-9.0	5.5-10.0	4.0-8.5	4.5-9.0	5.0-10.0
	L _w	34	37	38	39	36	37	38	37	38	40
33	l/s	338	405	473	540	506	591	674	709	810	942
core 22	Min - Max (m)	4.0-8.0	4.5-9.0	5.0-10.0	6.0-12.0	5.0-9.5	5.5-10.0	6.0-11.0	5.0-9.5	6.0-11.0	6.5-12.0
core 23	Min - Max (m)	4.0-8.0	4.5-9.0	5.0-10.0	5.5-12.0	5.0-10.0	5.5-11.0	6.0-12.0	5.0-9.5	5.5-10.0	6.0-11.0
	L _w	39	41	42	44	41	42	44	42	43	45
43	l/s	394	473	551	630	590	689	788	827	945	1103
core 22	Min - Max (m)	5.0-9.5	5.5-10.0	6.0-12.0	7.0-14.0	6.0-11.0	6.5-12.0	7.0-13.0	6.0-11.5	7.0-13.0	8.0-14.0
core 23	Min - Max (m)	5.0-9.5	5.5-10.5	6.0-12.0	7.0-14.0	6.0-12.0	7.0-13.0	7.5-14.0	6.0-12.0	7.0-13.0	7.0-14.0
	L _w	44	45	46	47	45	46	47	46	47	49

Louvered Face Diffusers

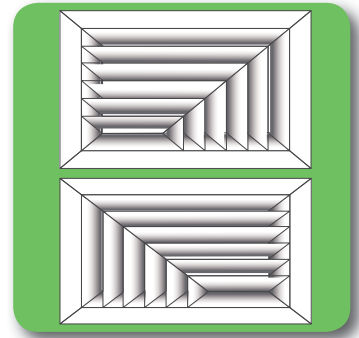
DF / DE core 26 / 27

Selection Criteria

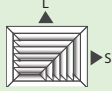
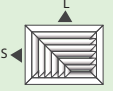
Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF26/450x150

Air flow rate 169 l/s
 Short side throw 2.5 - 4.0 m
 Long side throw 3.5 - 6.5 m
 Total Pressure Loss 23 Pa
 Noise level 32 dBA



Performance Table

DF / DE	Core 26 				Core 27 				S = Short side throw L = Long side throw			
	Supply											
Total pressure drop (Pa)	225 x 150	300 x 150	375 x 150	450 x 150	525 x 150	600 x 150	300 x 225	375 x 225	450 x 225	525 x 225	600 x 225	
9	I/s	51	67	84	101	118	135	101	127	153	177	203
	S Min - Max (m)	1.0-2.0	1.0-2.0	1.0-2.0	1.5-2.5	2.0-3.0	2.5-3.5	1.5-3.0	2.0-3.5	2.5-4.0	3.0-4.0	3.0-5.0
	L Min - Max (m)	1.5-2.5	2.0-3.5	2.0-4.0	2.5-4.5	2.5-5.0	3.0-5.5	2.0-4.0	2.5-4.5	3.0-5.0	3.5-5.5	3.5-6.0
	L _w	-	-	-	-	-	20	-	-	20	21	22
15	I/s	68	90	113	135	158	180	135	169	203	237	271
	S Min - Max (m)	1.0-2.5	1.0-2.5	1.0-2.5	1.5-3.0	2.0-3.5	2.5-3.5	2.0-4.0	2.5-4.5	3.0-5.0	3.0-5.5	3.0-6.0
	L Min - Max (m)	2.0-3.5	2.0-4.5	2.5-5.0	3.0-5.5	3.0-6.0	3.5-6.5	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	3.5-7.0
	L _w	23	25	25	26	27	28	27	28	28	29	30
23	I/s	84	113	140	169	197	225	169	211	253	295	337
	S Min - Max (m)	2.0-3.5	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	3.5-5.0	2.5-5.0	3.0-5.5	3.5-6.0	4.0-7.0	4.0-8.0
	L Min - Max (m)	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	4.0-8.0	2.5-6.0	3.0-6.5	3.5-7.0	4.0-8.0	4.5-9.0
	L _w	29	31	31	32	34	35	33	34	34	35	36
33	I/s	101	135	169	202	236	270	202	253	303	354	404
	S Min - Max (m)	2.0-4.0	2.0-4.0	2.0-4.0	2.5-4.5	3.5-5.0	3.5-5.5	2.5-6.0	3.0-6.5	3.5-7.0	4.0-8.0	4.5-9.0
	L Min - Max (m)	2.5-5.0	3.5-6.5	4.5-7.5	4.5-8.0	5.0-8.0	5.5-9.5	3.5-7.5	4.0-8.0	4.5-9.0	5.0-10.0	5.5-11.0
	L _w	34	36	37	38	39	40	38	39	39	41	42
43	I/s	118	158	197	236	275	315	236	295	354	413	472
	S Min - Max (m)	2.0-4.5	2.0-4.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	3.5-6.5	4.0-7.0	4.5-8.0	5.0-9.0	5.5-10.0
	L Min - Max (m)	3.0-6.0	4.0-7.5	4.5-8.5	5.5-9.0	5.5-10.0	6.0-11.0	4.5-8.0	5.0-9.0	5.5-9.0	6.0-11.0	7.0-12.0
	L _w	38	40	41	42	43	44	42	43	43	45	46

Total pressure drop (Pa)	375 x 300	450 x 300	525 x 300	600 x 300	450 x 375	525 x 375	600 x 375
9	I/s	169	203	236	271	253	296
	S Min - Max (m)	2.0-4.0	2.0-4.0	2.5-4.5	2.5-5.0	2.5-4.5	2.5-5.0
	L Min - Max (m)	2.5-5.0	2.5-5.0	3.0-5.5	3.0-6.0	3.0-5.5	3.0-6.0
	L _w	20	21	22	23	23	24
15	I/s	225	270	315	360	338	394
	S Min - Max (m)	2.5-5.0	2.5-5.0	3.0-5.5	3.0-6.0	3.0-5.5	3.0-6.0
	L Min - Max (m)	3.0-6.0	3.5-7.5	4.0-7.5	4.5-8.5	4.0-7.5	4.5-8.0
	L _w	28	29	31	32	30	31
23	I/s	281	338	394	441	422	492
	S Min - Max (m)	3.0-6.0	3.0-6.0	3.5-6.5	4.0-7.0	3.5-6.5	4.0-7.0
	L Min - Max (m)	4.5-7.0	4.5-9.5	5.0-10.0	5.5-11.0	5.0-10.0	6.0-11.0
	L _w	34	35	37	38	36	37
33	I/s	338	405	473	540	506	591
	S Min - Max (m)	4.0-7.5	4.0-7.5	4.5-8.5	5.0-9.0	4.5-8.5	5.0-9.0
	L Min - Max (m)	4.5-9.0	5.0-10.5	5.5-11.5	6.0-12.0	5.5-11.5	6.0-13.0
	L _w	39	40	41	43	41	43
43	I/s	394	473	551	630	590	689
	S Min - Max (m)	4.5-8.5	4.5-8.5	5.0-9.5	6.0-12.0	5.0-9.5	6.0-11.0
	L Min - Max (m)	5.0-10.5	6.5-12.0	6.5-13.0	8.0-15.0	6.5-13.0	7.0-15.0
	L _w	43	44	45	46	45	47

Louvred Face Diffusers

DF / DE core 31 / 41

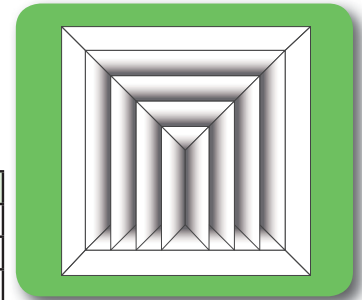
Selection Criteria

Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.


Selection Example DF31/300x300

Air flow rate 225 l/s
 Short side throw 2.0 - 4.5 m
 Long side throw 2.5 - 5.0 m
 Total Pressure Loss 23 Pa
 Noise level 33 dBA


Exhaust & OBSS corrections		
Supply diffuser	0dB	Pa x 1.0
Supply diffuser + OBSS	+ 3dB	Pa x 1.0
Exhaust diffuser	+ 3dB	Pa x 1.1
Exhaust diffuser + OBSS	+13dB	Pa x 1.15

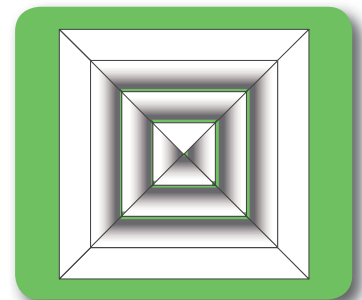


Performance Table

DF / DE	Supply	Core 31 						
		150 x 150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
Total pressure drop (Pa)		150 x 150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
9	I/s	34	76	135	211	304	413	540
	S Min - Max (m)	1.0-2.0	1.0-2.0	1.5-3.0	2.0-3.5	2.5-5.0	3.5-7.0	4.0-8.0
	L Min - Max (m)	1.0-2.0	1.0-2.5	2.0-3.5	2.0-4.0	3.5-6.5	4.5-9.0	5.5-10.0
	L _w	-	-	-	-	23	24	25
15	I/s	45	101	180	282	405	551	720
	S Min - Max (m)	1.0-2.0	1.0-2.5	2.0-4.0	2.0-4.5	2.5-5.0	3.5-7.0	4.0-8.0
	L Min - Max (m)	1.0-2.0	2.0-3.5	2.0-4.5	2.5-5.0	3.5-7.0	5.0-9.5	5.5-10.0
	L _w	-	24	27	29	30	31	32
23	I/s	56	127	225	352	506	689	900
	S Min - Max (m)	1.0-2.0	2.0-3.5	2.0-4.5	2.5-5.5	3.5-6.5	4.0-7.0	5.0-8.0
	L Min - Max (m)	1.5-2.5	2.0-4.0	2.5-5.0	3.5-6.0	4.0-8.0	5.5-9.0	5.0-10.0
	L _w	26	30	33	35	36	37	38
33	I/s	63	152	270	422	608	827	1080
	S Min - Max (m)	1.5-2.5	2.0-4.5	2.5-5.0	3.5-6.5	4.0-8.0	4.5-9.0	5.0-10.0
	L Min - Max (m)	2.0-3.5	2.5-5.5	3.5-6.5	4.0-8.0	5.0-10.0	5.5-11.0	6.0-12.0
	L _w	31	35	38	40	41	42	43
43	I/s	79	177	315	492	709	964	1260
	S Min - Max (m)	2.0-3.5	2.5-4.5	3.0-6.0	4.0-7.5	4.5-9.0	5.0-10.0	6.0-12.0
	L Min - Max (m)	2.0-4.0	2.5-6.0	4.0-7.5	5.0-9.5	6.0-11.5	6.5-12.0	7.0-14.0
	L _w	35	39	42	44	45	46	47

Performance Table

DF / DE	Supply	Core 41 						
		150 x 150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
Total pressure drop (Pa)		150 x 150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
9	I/s	34	76	135	211	304	413	540
	Min Max (m)	1.0-1.5	1.0-2.0	1.5-2.5	2.0-3.5	2.0-4.0	2.5-5.0	2.5-5.5
	L _w	-	-	-	-	23	24	25
15	I/s	45	101	180	282	405	551	720
	Min Max (m)	1.0-2.0	1.5-2.5	2.0-3.5	2.0-4.5	2.5-5.0	3.0-6.0	3.5-7.0
	L _w	-	24	27	28	30	31	32
23	I/s	56	127	225	352	506	689	900
	Min Max (m)	1.5-2.5	2.0-3.5	2.0-4.5	2.5-5.5	3.5-6.5	4.0-8.0	4.5-8.5
	L _w	26	30	33	34	36	37	38
33	I/s	68	152	270	422	608	827	1080
	Min Max (m)	1.5-3.0	2.0-4.0	2.5-5.0	3.5-6.5	4.0-8.0	4.5-9.0	5.0-10.5
	L _w	31	35	38	39	41	42	43
43	I/s	79	177	315	492	709	964	1260
	Min Max (m)	2.0-3.5	2.0-4.5	3.0-6.0	4.0-7.5	4.5-9.0	5.0-10.5	6.0-12.0
	L _w	35	39	42	43	45	46	47



Selection Example DF41/300x300

Air flow rate 225 l/s
 Throw 2.0 - 4.5 m
 Total Pressure Loss 23 Pa
 Noise level 33 dBA

Louvred Face Diffusers

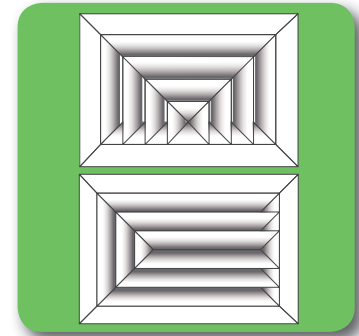
DF / DE core 32 / 33

Selection Criteria

Ceiling height 2.7 m
 Temperature differential -10K
 Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.
 Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF32/450x150

Air flow rate 169 l/s
 Short side throw 1.5 - 3.0 m
 Long side throw 3.0 - 6.0 m
 Total Pressure Loss 23 Pa
 Noise level 31 dBA



Performance Table

DF / DE	Core 32				Core 33							
	Supply											
Total pressure drop (Pa)	225 x 150	300 x 150	375 x 150	450 x 150	525 x 150	600 x 150	300 x 225	375 x 225	450 x 225	525 x 225	600 x 225	
9	I/s	51	67	84	101	118	135	101	127	153	177	203
	S Min - Max (m)	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0	1.5-2.5	2.0-4.0	1.5-3.0	2.0-3.0	2.5-4.0	3.0-5.0	3.0-6.0
	L Min - Max (m)	1.0-2.0	1.5-2.5	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	1.5-3.0	2.0-3.5	2.5-4.0	2.5-5.0	3.0-6.0
	L _w	-	-	-	-	-	-	-	-	-	20	21
15	I/s	68	90	113	135	158	180	135	169	203	237	271
	S Min - Max (m)	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0	1.5-2.5	2.0-3.0	2.0-4.0	2.5-3.5	3.0-4.0	3.5-5.0	4.0-5.5
	L Min - Max (m)	1.0-2.5	2.0-3.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	2.0-4.0	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5
	L _w	20	24	25	25	26	27	25	26	27	28	29
23	I/s	84	113	140	169	197	225	169	211	253	295	337
	S Min - Max (m)	1.5-3.0	1.5-3.0	1.5-3.0	1.5-3.0	1.5-3.5	2.0-4.0	2.0-4.5	2.0-4.0	2.5-5.0	3.0-6.0	3.5-7.0
	L Min - Max (m)	2.0-3.5	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	2.0-4.5	2.5-5.5	3.0-6.0	3.5-7.0	4.0-9.0
	L _w	28	30	31	31	33	34	31	32	33	34	35
33	I/s	101	135	169	202	236	270	202	253	303	354	404
	S Min - Max (m)	2.0-3.5	2.0-3.5	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	2.5-5.0	2.5-5.0	3.0-6.0	3.5-7.0	4.0-8.0
	L Min - Max (m)	2.0-4.0	2.5-5.0	3.5-6.5	4.0-7.5	4.5-8.5	5.0-9.0	2.5-5.0	3.5-6.5	4.0-7.0	4.5-9.0	5.0-10
	L _w	33	35	36	36	37	39	36	37	38	39	40
43	I/s	118	158	197	236	275	315	236	295	354	413	472
	S Min - Max (m)	2.0-4.5	2.0-4.5	2.0-4.5	2.0-4.5	2.5-5.5	3.0-6.0	3.0-6.0	3.5-6.5	4.0-7.0	5.0-8.0	5.5-9.0
	L Min - Max (m)	2.5-4.5	3.0-6.0	4.0-7.5	4.5-8.5	5.0-9.5	5.5-11.0	3.0-6.0	4.0-8.0	4.5-9.0	5.0-10.0	5.5-12.0
	L _w	37	39	40	41	42	43	41	41	42	43	44

Total pressure drop (Pa)	375 x 300	450 x 300	525 x 300	600 x 300	450 x 375	525 x 375	600 x 375	525 x 450	600 x 450	600 x 525	
9	I/s	169	203	236	271	253	296	339	354	406	474
	S Min - Max (m)	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	2.0-4.0	2.5-4.5	3.0-5.0	2.5-5.0	3.0-5.5	3.0-5.5
	L Min - Max (m)	2.0-3.5	2.0-4.0	2.5-4.5	3.0-5.0	2.0-4.5	2.5-5.0	3.0-6.0	2.5-5.0	3.0-5.5	3.0-5.5
	L _w	-	20	21	22	21	23	25	24	24	25
15	I/s	225	270	315	360	338	394	450	472	540	629
	S Min - Max (m)	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	2.5-5.0	3.0-5.5	3.5-6.0	3.0-6.0	3.5-6.5	3.5-6.5
	L Min - Max (m)	2.5-5.0	2.5-5.0	3.0-5.5	3.5-6.0	2.5-5.5	3.0-6.0	3.5-6.5	3.5-6.5	4.0-7.0	4.0-7.0
	L _w	27	28	29	30	29	30	31	31	31	32
23	I/s	281	338	394	441	422	492	562	591	675	785
	S Min - Max (m)	2.5-5.5	2.5-6.0	3.0-6.5	3.5-7.0	3.5-6.5	4.0-7.0	4.5-7.5	4.0-7.5	4.5-8.0	4.5-8.0
	L Min - Max (m)	2.5-6.0	3.5-6.5	4.0-7.0	4.5-7.5	3.5-7.5	4.0-8.0	4.5-8.5	4.5-8.5	5.0-9.0	5.0-9.0
	L _w	33	34	35	36	35	36	37	37	37	39
33	I/s	338	405	473	540	506	591	674	709	810	942
	S Min - Max (m)	3.5-6.5	3.5-7.5	4.0-8.0	4.5-8.5	4.0-8.0	4.5-9.0	5.0-9.5	4.5-9.0	5.0-10.0	5.0-9.5
	L Min - Max (m)	3.5-7.5	4.0-8.0	4.5-8.5	5.0-9.0	4.5-8.5	5.0-9.0	5.5-10.0	5.0-10.0	5.5-11.0	5.5-10.5
	L _w	38	39	40	41	40	41	42	42	42	43
43	I/s	394	473	551	630	590	689	788	827	945	1103
	S Min - Max (m)	4.0-7.5	4.0-8.0	4.5-8.5	5.0-9.0	4.5-9.0	5.0-10.0	5.5-11.0	5.5-11.0	6.0-12.0	6.0-11.5
	L Min - Max (m)	4.0-8.0	4.5-9.0	5.0-9.5	5.5-10.0	5.0-10.0	5.5-11.0	6.0-12.0	6.0-12.0	6.5-13.0	6.5-12.5
	L _w	42	43	44	45	44	45	46	46	47	47

Louvred Face Diffusers

DTR Tile Replacement

Introduction

The DTR is a Direct Tile Replacement overall size 595 x 595 mm.

Available in neck sizes of 225 and 300 mm. Horizontal air supply in four directions, also suitable for exhaust.

Installation flush to the ceiling, low unit height.

Removable front panel enables cleaning of the diffuser and ductwork.

Product Description

DTR Direct Tile Replacement

Features

- Lightweight construction

Finishes

PPG9010 (RAL 9010 Gloss - 80% Gloss White)

PPM9010 (RAL 9010 Matt - 20% Gloss White)

PPM9006 (RAL 9006 Matt - 30% Gloss Silver)

Other colours available on request

Sizes

DTR Overall size 595 x 595 mm.

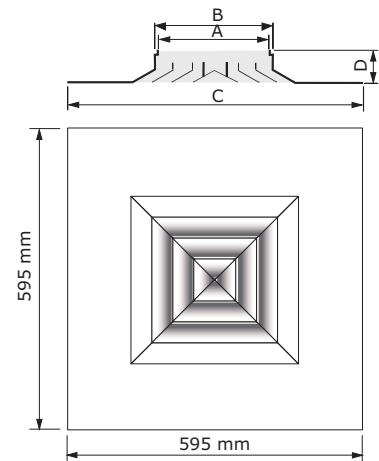
Available in neck sizes of 225 and 300 mm.

Std. Size mm	A	B	C	D
225 X 225	209	221	595	45
300 X 300	284	294	595	45

ORDER EXAMPLE

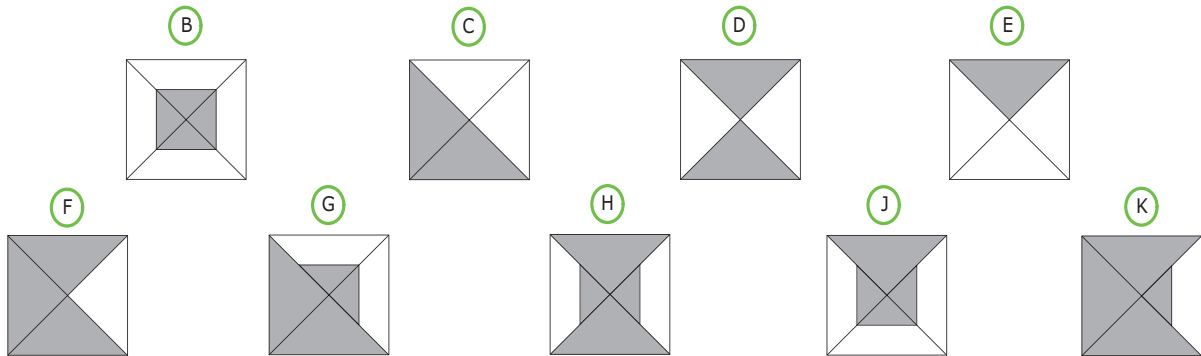
DTR/300/300/PPM9010/OBSS

Type _____
 Duct width _____
 Duct height _____
 Finish _____
 Damper _____



DTR			
Supply			
Total pressure drop (Pa)		225 x 225	300 x 300
9	I/s	76	135
	Min - Max (m)	1.0-2.0	1.5-2.5
	L _w	-	-
15	I/s	101	180
	Min - Max (m)	1.5-2.5	2.0-3.5
	L _w	24	27
23	I/s	127	225
	Min - Max (m)	2.0-3.5	2.0-4.5
	L _w	30	33
33	I/s	152	270
	Min - Max (m)	2.0-4.0	2.5-5.0
	L _w	35	38
43	I/s	177	315
	Min - Max (m)	2.0-4.5	3.0-6.0
	L _w	39	42

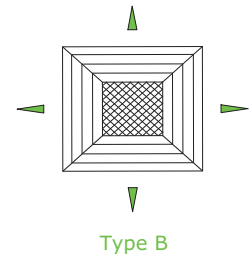
Blanking Plates (for 4 way core)



Type B core 41 - 4 way (Neck 450 x450)

UNBLANKED					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	203	304	405	506	608
dBA Level	26	30	35	39	42
Min Rad	1.7	2.0	2.5	3.5	4.0
Max Rad	3.4	4.0	5.0	6.5	8.0

BLANK B 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	180	270	360	450	540
dBA Level	25	29	34	38	41
Min Rad	1.6	2.0	2.4	3.3	3.9
Max Rad	3.3	3.9	4.9	6.3	7.6



BLANK B 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	152	228	304	380	456
dBA Level	25	29	33	37	40
Min Rad	1.5	1.7	2.2	2.7	3.7
Max Rad	2.9	3.7	4.7	5.7	6.8

Blank B 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	113	169	225	281	338
dBA Level	-	26	30	34	38
Min Rad	1.5	1.7	2.0	2.2	2.8
Max Rad	2.0	2.8	3.8	4.8	5.5

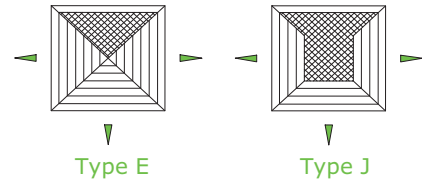
BLANK B 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	62	93	124	155	186
dBA Level	-	-	27	30	33
Min Rad	0.9	1.2	1.7	2.0	2.2
Max Rad	1.7	2.2	2.8	3.8	4.5

Louvered Face Diffusers Blanking Plates (for 4 way core)

Type E & J core 41 - 3 way (Neck 450 x 450)

BLANK E					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	152	228	304	380	456
dBA Level	25	30	34	38	40
Min Rad	2.2	2.5	2.7	3.3	4.0
Max Rad	3.7	4.5	5.5	7.0	8.1

BLANK J 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	135	203	270	338	405
dBA Level	-	29	32	36	39
Min Rad	1.4	1.8	2.2	2.7	3.7
Max Rad	2.7	3.6	4.7	5.7	6.7



BLANK J 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	114	171	228	285	342
dBA Level	-	28	31	34	37
Min Rad	1.3	1.7	2.0	2.5	3.1
Max Rad	2.4	3.2	4.1	4.8	5.5

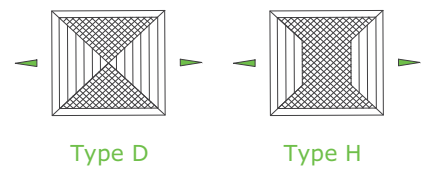
BLANK J 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	84	127	169	211	253
dBA Level	-	26	30	34	36
Min Rad	1.2	1.5	1.9	2.3	2.5
Max Rad	2.2	2.8	3.4	4.0	4.4

BLANK J 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	46	70	93	116	139
dBA Level	-	-	27	31	35
Min Rad	0.8	1.0	1.4	1.8	2.3
Max Rad	1.7	2.0	2.9	3.6	4.7

Type D & H core 41 - 2 way opposite (Neck 450 x 450)

BLANK D					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	101	152	203	253	304
dBA Level	-	28	32	36	39
Min Rad	1.8	2.2	2.7	3.5	4.3
Max Rad	3.7	4.0	5.5	6.7	8.5

BLANK H 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	90	135	180	225	270
dBA Level	-	27	31	35	38
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5



BLANK H 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	76	114	152	190	228
dBA Level	-	26	30	34	38
Min Rad	1.2	1.8	2.0	2.5	3.1
Max Rad	2.1	3.0	4.2	5.7	6.5

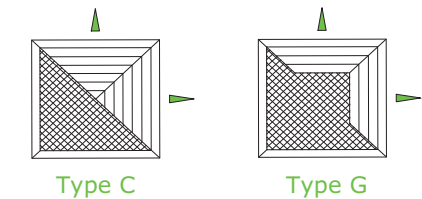
BLANK H 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	56	84	113	141	169
dBA Level	-	25	29	33	36
Min Rad	1.0	1.5	2.0	2.5	2.7
Max Rad	1.9	2.5	3.5	5.0	5.5

BLANK H 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	31	46	62	77	93
dBA Level	-	-	25	30	34
Min Rad	0.8	1.2	1.5	2.0	2.3
Max Rad	1.7	2.2	3.0	4.0	4.5

Type C & G core 41 - 2 way corner (Neck 450 x 450)

BLANK C					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	101	152	203	253	304
dBA Level	-	28	32	36	39
Min Rad	1.8	2.2	2.7	3.5	4.3
Max Rad	3.7	4.0	5.5	6.7	8.5

BLANK G 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	90	135	180	225	270
dBA Level	-	27	31	35	38
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5



BLANK G 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	76	114	152	190	228
dBA Level	-	26	30	34	38
Min Rad	1.2	1.8	2.0	2.5	3.1
Max Rad	2.1	3.0	4.2	5.7	6.5

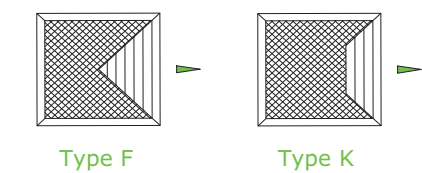
BLANK G 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	56	84	113	141	169
dBA Level	-	25	29	33	36
Min Rad	1.0	1.5	2.0	2.5	2.7
Max Rad	1.9	2.5	3.5	5.0	5.5

BLANK G 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	31	46	62	77	93
dBA Level	-	-	25	30	34
Min Rad	0.8	1.2	1.5	2.0	2.3
Max Rad	1.7	2.2	3.0	4.0	4.5

Type F & K core 41 - 1 way (Neck 450 x 450)

BLANK F					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	51	76	101	127	152
dBA Level	-	26	29	33	36
Min Rad	1.5	2.0	2.5	3.5	4.0
Max Rad	3.0	4.0	5.5	6.5	8.0

BLANK K 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	45	68	90	113	135
dBA Level	-	24	29	32	34
Min Rad	1.4	1.9	2.4	3.3	3.8
Max Rad	2.8	3.9	5.3	6.2	7.6



BLANK K 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	38	57	76	95	114
dBA Level	-	-	27	30	34
Min Rad	1.2	1.8	2.3	3.1	3.5
Max Rad	2.5	3.7	4.8	5.8	6.7

BLANK K 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	28	42	56	70	84
dBA Level	-	-	26	30	33
Min Rad	1.1	1.6	2.2	2.8	3.1
Max Rad	2.3	3.5	4.2	5.3	6.4

BLANK K 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	15	23	31	39	46
dBA Level	-	-	-	27	31
Min Rad	0.8	1.3	1.9	2.1	2.5
Max Rad	1.8	2.3	3.4	4.4	5.3

Louvred Face Diffusers

DF / DE core 42

Selection Criteria

Ceiling height 2.7 m

Temperature differential -10K

Radius of diffusion - Minimum and maximum throw which results in an average air velocity within the occupied zone of 0.25m/s and 0.10m/s respectively.

Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example DF42/450x150

Air flow rate 169 l/s

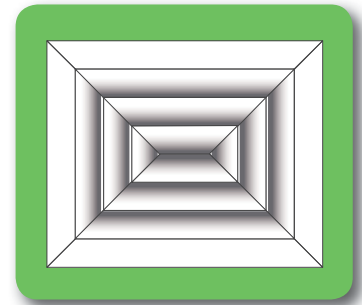
Short side throw 1.0 - 2.5 m

Long side throw 2.5 - 5.0 m

Total Pressure Loss 23 Pa

Noise level 31 dBA

Exhaust & OBSS corrections		
Supply diffuser	0dB	Pa x 1.0
Supply diffuser + OBSS	+ 3dB	Pa x 1.0
Exhaust diffuser	+ 3dB	Pa x 1.1
Exhaust diffuser + OBSS	+ 13dB	Pa x 1.15



Performance Table

DF / DE	Core 42											
		S = Short side throw L = Long side throw										
Supply	Total pressure drop (Pa)	225 x 150	300 x 150	375 x 150	450 x 150	525 x 150	600 x 150	300 x 225	375 x 225	450 x 225	525 x 225	600 x 225
	l/s	51	67	84	101	118	135	101	127	153	177	203
9	S Min - Max (m)	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.5-2.0	2.0-2.5	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0	1.5-2.5
	L Min - Max (m)	1.0-2.0	1.0-2.5	1.5-3.0	1.5-3.5	2.0-4.0	2.5-4.5	1.0-2.5	1.5-3.0	2.0-3.5	2.0-4.0	2.5-4.5
	L _w	-	-	-	-	-	-	-	-	-	-	20
15	l/s	68	90	113	135	158	180	135	169	203	237	271
	S Min - Max (m)	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0	1.5-2.5	2.0-3.0	1.0-2.5	1.0-2.5	1.0-2.5	1.0-2.5	1.5-3.0
	L Min - Max (m)	1.0-2.5	1.5-3.5	2.0-3.5	2.0-4.0	2.5-4.5	3.0-5.0	2.0-3.5	2.0-3.5	2.5-4.0	2.5-5.0	3.0-5.5
23	l/s	84	113	140	169	197	225	169	211	253	295	337
	S Min - Max (m)	1.0-2.5	1.0-2.5	1.0-2.5	1.0-2.5	1.5-3.0	2.0-3.5	2.0-3.5	2.0-3.5	2.0-3.5	2.0-3.5	2.5-4.0
	L Min - Max (m)	1.5-3.5	2.0-3.5	2.0-4.5	2.5-5.0	3.0-5.5	3.5-6.0	2.0-4.5	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5
33	l/s	101	135	169	202	236	270	202	253	303	354	404
	S Min - Max (m)	1.5-3.0	1.5-3.0	1.5-3.0	1.5-3.0	2.0-3.5	2.5-4.0	2.0-4.0	2.0-4.0	2.0-4.0	2.0-4.0	2.5-4.5
	L Min - Max (m)	2.0-3.5	2.0-4.5	2.5-5.0	2.5-6.0	3.0-6.5	3.5-7.0	2.5-5.0	3.0-6.5	3.5-7.0	4.0-7.5	4.5-8.0
43	l/s	118	158	197	236	275	315	236	295	354	413	472
	S Min - Max (m)	2.0-3.5	2.0-3.5	2.0-3.5	2.0-3.5	2.5-4.0	3.0-4.5	2.0-4.5	2.0-4.5	2.0-4.5	2.0-4.5	2.5-5.0
	L Min - Max (m)	2.0-4.5	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	4.5-7.5	2.5-6.0	3.5-7.5	4.0-8.0	4.5-8.5	5.0-9.0
L _w	37	39	40	40	41	42	40	41	41	42	43	

Supply	Total pressure drop (Pa)	375 x 300	450 x 300	525 x 300	600 x 300	450 x 375	525 x 375	600 x 375	525 x 450	600 x 450	600 x 525
	l/s	169	203	236	271	253	296	339	354	406	474
9	S Min - Max (m)	1.0-2.5	1.0-2.5	1.0-2.5	1.5-3.0	2.0-3.5	2.0-3.5	2.5-4.0	2.0-4.0	2.0-4.0	2.5-4.5
	L Min - Max (m)	2.0-3.5	2.0-3.5	2.0-4.5	2.5-5.0	2.0-4.0	2.0-4.5	2.5-5.0	2.5-5.0	2.5-5.0	3.0-5.5
	L _w	-	20	21	21	21	23	23	24	24	24
15	l/s	225	270	315	360	338	394	450	472	540	629
	S Min - Max (m)	2.0-3.5	2.0-3.5	2.0-3.5	2.5-4.0	2.0-4.5	2.0-4.5	2.5-5.0	2.5-5.0	2.5-5.0	3.0-5.5
	L Min - Max (m)	2.0-4.5	2.5-5.0	2.5-6.0	3.0-6.5	2.5-5.0	2.5-6.0	3.0-6.5	3.0-6.0	3.5-7.0	4.0-7.5
23	l/s	281	338	394	441	422	492	562	591	675	785
	S Min - Max (m)	2.0-4.0	2.0-4.5	2.0-4.5	2.5-5.0	2.5-5.5	2.5-5.5	3.0-6.0	3.5-6.5	3.5-6.5	4.0-7.0
	L Min - Max (m)	2.5-5.0	3.0-6.0	3.5-6.5	4.0-7.0	3.5-6.5	3.5-7.5	4.0-8.0	4.0-7.5	4.5-8.5	5.0-9.0
33	l/s	338	405	473	540	506	591	674	709	810	942
	S Min - Max (m)	2.5-5.0	2.5-5.0	2.5-5.0	3.0-5.5	3.5-6.5	3.5-6.5	4.0-7.0	4.0-8.0	4.0-8.0	4.5-8.5
	L Min - Max (m)	3.5-6.5	4.0-8.0	4.0-8.0	4.5-8.5	4.0-7.5	4.5-8.5	5.0-9.0	4.5-9.0	5.0-10.0	5.5-10.5
43	l/s	394	473	551	630	590	689	788	827	945	1103
	S Min - Max (m)	3.0-6.0	3.0-6.0	3.0-6.0	3.5-5.5	4.0-7.5	4.0-7.5	4.5-8.0	4.5-9.0	4.5-9.0	5.0-9.5
	L Min - Max (m)	4.0-7.5	4.5-8.0	5.0-9.5	4.5-8.5	4.5-9.0	5.0-10.5	5.5-11.0	5.0-10.5	6.0-12.0	6.5-12.5
L _w	42	43	44	44	44	45	45	46	47	47	