KOOLAIR

series 40.3

Fixed blades swirl diffusers

ISO 9001
BUREAU VERITAS
Certification
Sistema de Gestión

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CONTENTS

Fixed blade swirl diffuser

DFRE

Swirl difuser DFRE

Fixed blade swirl diffusers, inserted in square plate, specially designedto be adapted into a false or plasterboard ceilings. Made of sheet steel and finished inwhite RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

DFRE-C

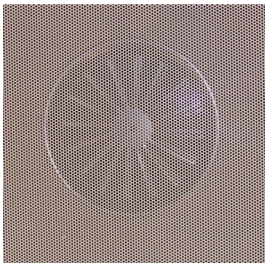
Swirl difuser DFRE-C

Circular fixed blade swirl diffuser. These diffusers are inserted in square panels for adaption to to “lay in” tile replacements ceilings. Made of steel sheet, coated in white RAL 9010. Special finishes available upon request. The plenum box incorporates in the spigot an operated volume flow damper, accesible from the local, made of perforated sheet. Upon request, plenum boxes can be provided with interior isolation.

DFRE-GR

Swirl difuser DFRE-GR

Circular fixed blade swirl diffuser. These diffusers are inserted in square panels for adaption to “lay in” tile replacements ceilings. Made of steel sheet, coated in white RAL 9010. Special finishes available upon request. The plenum box incorporates in the spigot an operated volume flow damper, accesible from the local, made of perforated sheet. Upon request, plenum boxes can be provided with interior isolation.



DFRE-GR-PR

Swirl difuser DFRE-GR-PR

Fixed blade swirl diffuser integrated in a perforated plate. The diffuser consists of a perforated plate covers by an insulating material and a fixed blade swirl diffuser on the rear. Made of steel sheet, coated in white RAL 9010. Special finishes available upon request. The plenum box incorporates in the spigot an operated volume flow damper, accesible from the local, made of perforated sheet. Upon request, plenum boxes can be provided with interior isolation.

Fixed blade swirl diffuser

DAFC

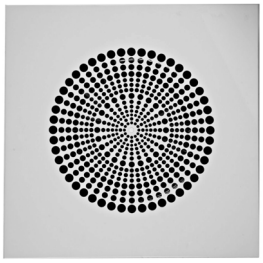
Swirl difuser DAFC

Fixed curved blade swirl diffuser. These diffusers are inserted in square panels for adaption to “lay in” tile replacements ceilings. Made of steel sheet, coated in white RAL 9010. Special finishes available upon request. The plenum box incorporates in the spigot a manually operated volume flow damper made of perforated sheet. Upon request, plenum boxes can be provided with interior isolation.

DAFC-C

Swirl difuser DAFC-C

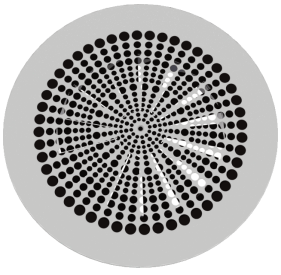
Circular fixed curved blade swirl diffuser. These diffusers are inserted in square panels for adaption to “lay in” tile replacements ceilings. Made of steel sheet, coated in white RAL 9010. Special finishes available upon request. The plenum box incorporates in the spigot an operated volume flow damper, accesible from the local, made of perforated sheet. Upon request, plenum boxes can be provided with interior isolation.



HDPR

Swirl difuser HDPR

Fixed blade swirl diffusers, well-integrated into square pre-drilled plate, specially designed to be adapted into false ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

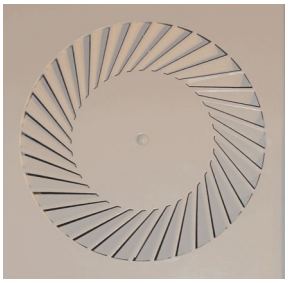


HDPR-C

Swirl difuser HDPR-C

Fixed blade swirl diffusers, well- integrated into circular predrilled plate, specially designed be adapted into plasterboard ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

Fixed blade swirl diffuser



DAFT

Swirl difuser DAFT

Fixed inclined blade swirl diffusers, integrated into square plate, specially designed to be adapted into false or plasterboard ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

DAFT-C

Swirl difuser DAFT-C

Fixed inclined blade swirl diffusers integrated into circular plate, specially designed to be adapted into plasterboard ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

DFRT

Swirl difuser DFRT

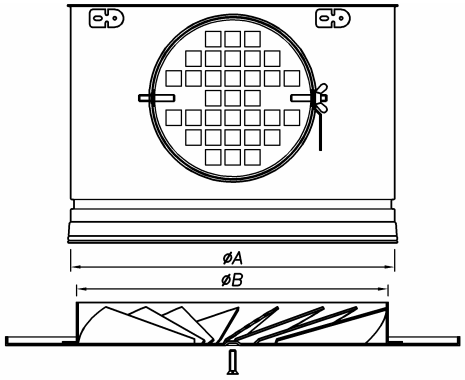
Fixed straight blade swirl diffusers integrated into square plate, specially designed to be adapted into false or plasterboard ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

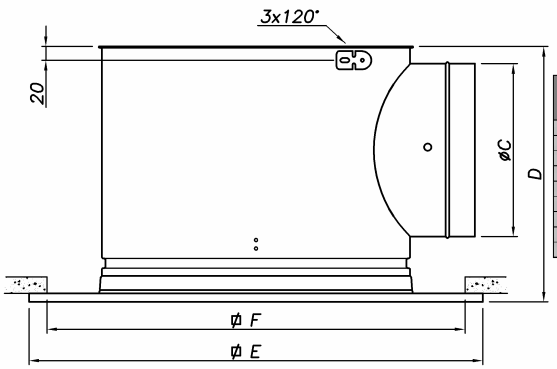
DFRT-C

Swirl difuser DFRT-C

Fixed inclined blade swirl diffusers integrated into circular plate, specially designed to be adapted into plasterboard ceilings. Made of sheet steel and finished in white RAL 9010, others special finishes are available upon request. The circular plenum incorporates a VCD on the spigot made on perforate plate; it can be accessible from the room upon request. On request, the plenum can be supplied insulating material.

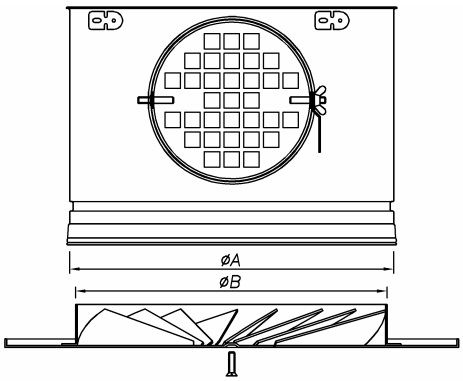
Models and dimensions: DFRE / DFRE-Q

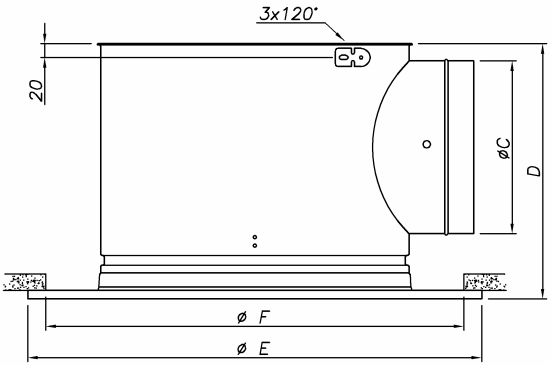




DIFFUSER	Ø A	Ø B	Ø C	D	DFRE		DFRE-Q	
					E	F	E	F
100	113	99	99	171	152	127		
125	138	124	99	171	171	146		
160	173	159	124	196	213	188		
200	213	199	159	231	264	239		
250	263	249	199	271	326	301	595	570
315	328	314	249	321	405	380		
355	368	354	249	321	455	430		
400	413	399	314	386	510	485		
500	513	499	314	386	594	569		

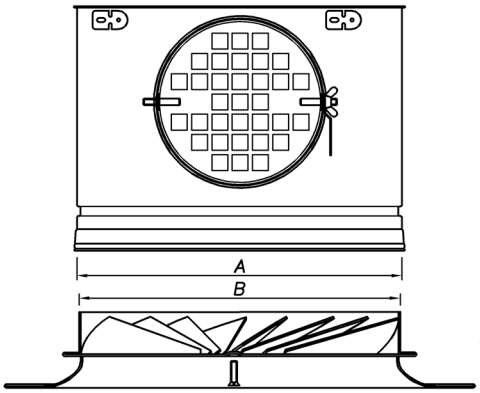
Models and dimensions: DFRE-C

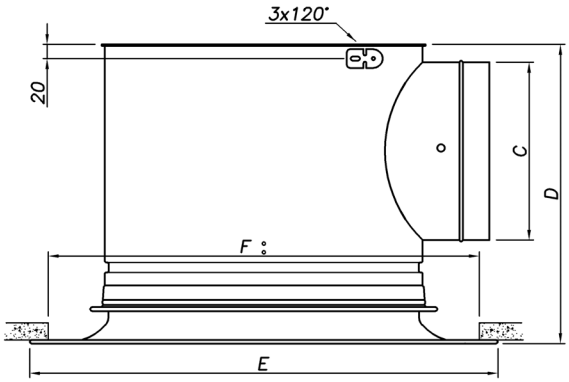




DIFFUSER	Ø A	Ø B	Ø C	D	E	F
100	113	99	99	171	152	127
125	138	124	99	171	173	148
160	173	159	124	196	208	183
200	213	199	159	231	272	247
250	263	249	199	271	328	303
315	328	314	249	321	403	378
355	368	354	249	321	500	475
400	413	399	314	386	594	569
500	513	499	314	386	594	569

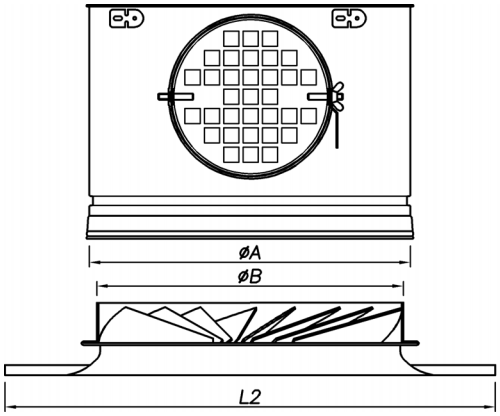
Models and dimensions: DFRE-GR / DFRE-GR-Q

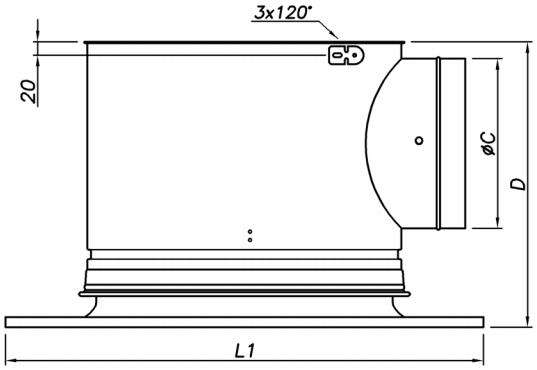




DIFFUSER	A	B	C	D	E	F
100	105	99	99	197	175	150
125	130	124	99	197	200	175
160	165	159	124	222	253	228
200	205	199	159	257	303	278
250	255	249	199	297	353	328
315	320	314	249	347	418	393
355	360	354	249	347	458	433
400	405	399	314	412	503	478
500	505	499	314	412	603	578

DFRE-GR

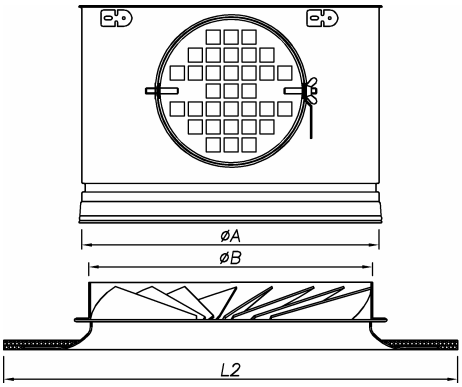


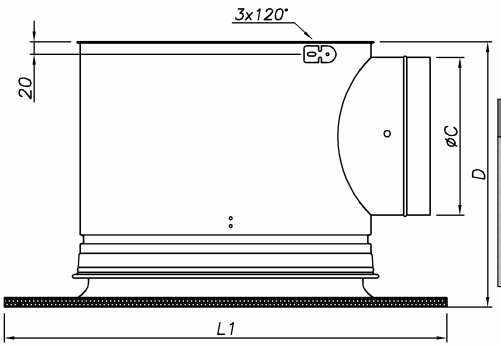


DIFFUSER	A	B	C	D	DFRE-GR-Q L1 x L2
125	130	124	99	198	
160	165	159	124	223	
200	205	199	159	258	
250	255	249	199	298	594 x 594
315	320	314	199	298	
355	360	354	249	348	
400	405	399	249	348	

DFRE-GR-Q

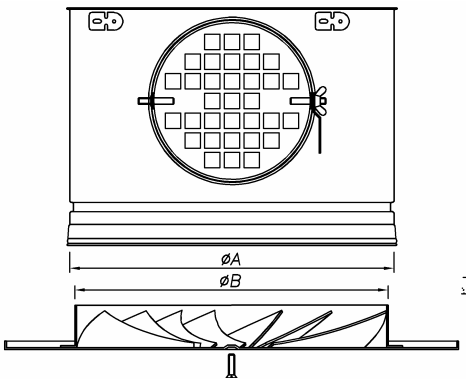
Models and dimensions: DFRE-GR-PR / DFRE-GR-PR-Q

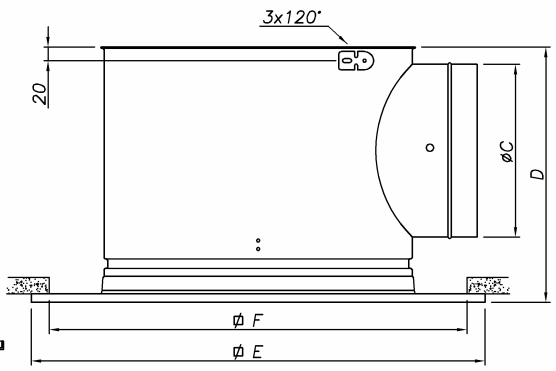




DIFFUSER	Ø A	Ø B	Ø C	D	DFRE-GR-PR L1 x L2	DFRE-GR-PR-Q L1 x L2
125	136	124	99	198	594 x 1194	594 x 594
160	171	159	124	223		
200	211	199	159	258		
250	261	249	199	298		
315	326	314	199	298		
355	366	354	249	348		
400	411	399	249	348		
500	511	499	314	413		

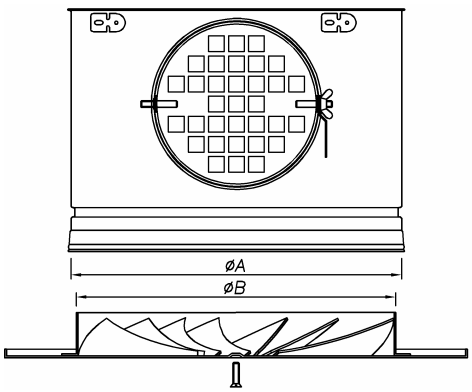
Models and dimensions: DAFC / DAFC-Q

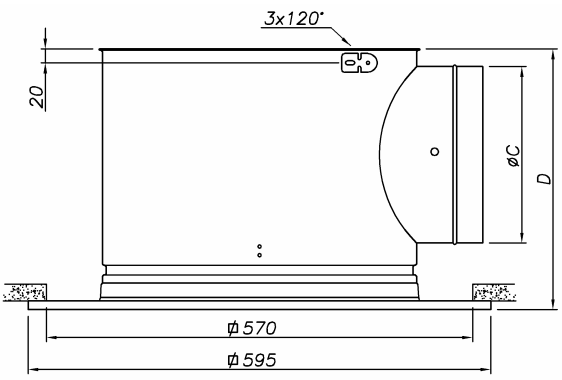




DIFFUSER	A	B	C	D	E	F
125	138	124	99	171	171	146
160	173	159	124	196	213	188
200	213	199	159	231	264	239
250	263	249	199	271	326	301
315	328	314	199	271	405	380
355	368	354	249	321	455	430
400	413	399	249	321	510	485
500	513	499	314	386	594	569

DAFC

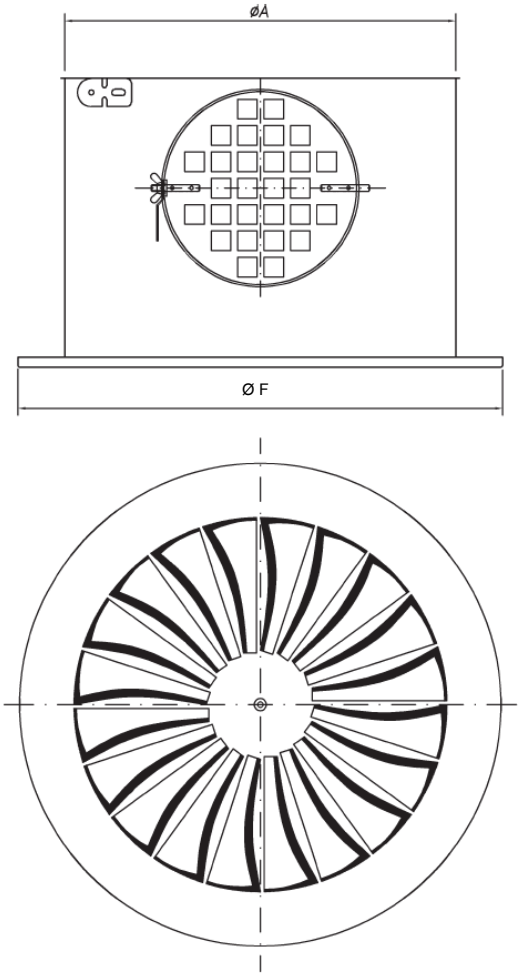


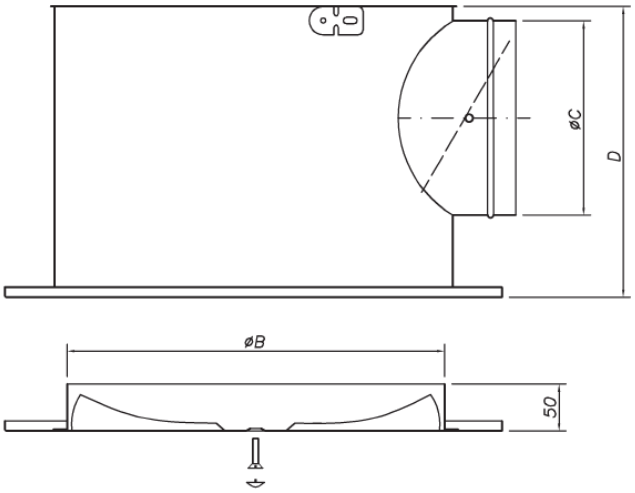


DIFFUSER	A	B	C	D
125	138	124	99	171
160	173	159	124	196
200	213	199	159	231
250	263	249	199	271
315	328	314	199	271
355	368	354	249	321
400	413	399	249	321
500	513	499	314	386

DAFC-Q

Models and dimensions: DAFC-C

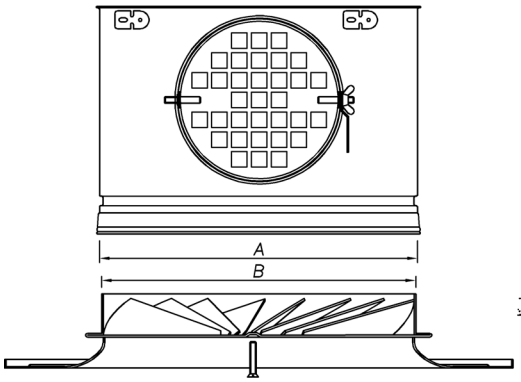


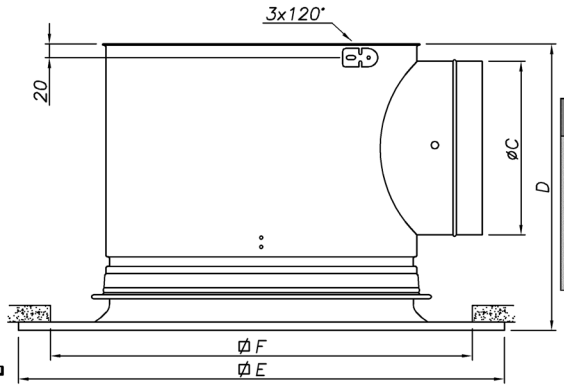


DIMENSIONS

MODEL	Ø A	Ø B	Ø C	D	Ø F
125	136	124	99	170	173
160	171	159	124	195	208
200	211	199	159	230	272
250	261	249	199	270	328
315	326	314	199	270	403
355	366	354	249	320	500
400	411	399	249	320	594
500	511	499	314	385	594

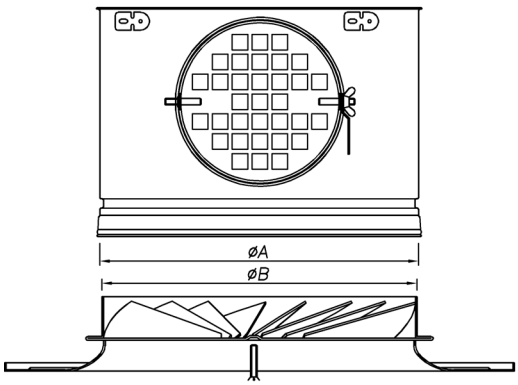
Models and dimensions: HDPR / HDPR-C / HDPR-Q

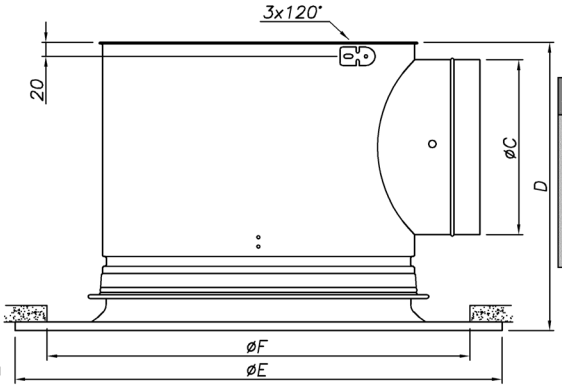




DIFFUSER	A	B	C	D	E	F
125	137	124	99	198	270	245
160	172	159	124	223	298	273
200	212	199	159	258	363	338
250	262	249	199	298	403	378
315	327	314	199	298	500	475
355	367	354	249	348	500	475
400	412	399	249	348	550	525

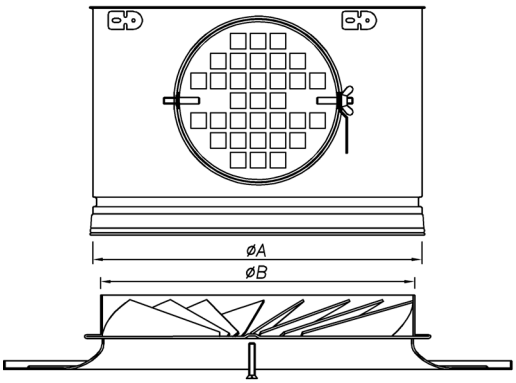
HDPR

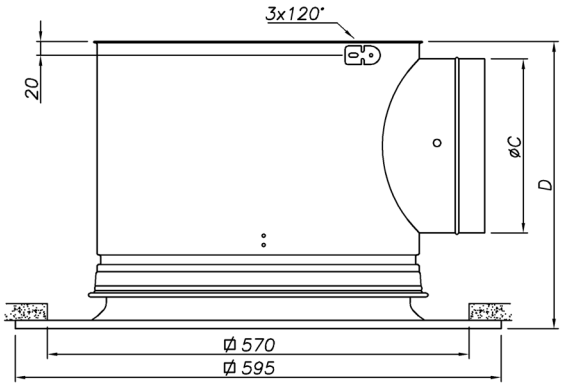




DIFFUSER	A	B	C	D	E	F
125	137	124	99	198	270	245
160	172	159	124	223	298	273
200	212	199	159	258	363	338
250	262	249	199	298	403	378
315	327	314	199	298	500	475
355	367	354	249	348	500	475
400	412	399	249	348	550	525

HDPR-C

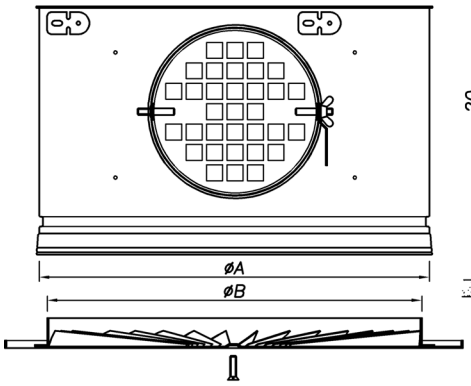


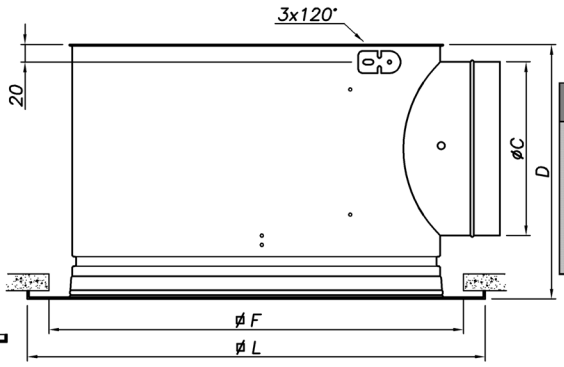


DIFFUSER	A	B	C	D
125	137	124	99	198
160	172	159	124	223
200	212	199	159	258
250	262	249	199	298
315	327	314	199	298
355	367	354	249	348
400	412	399	249	348

HDPR-Q

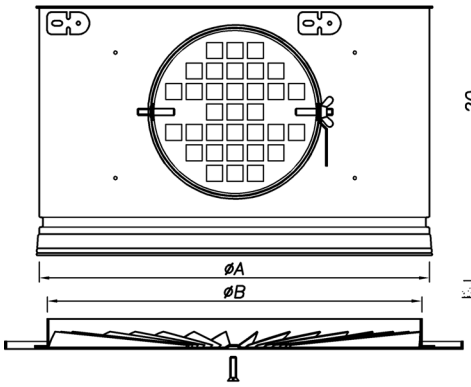
Models and dimensions: DAFT / DAFT-Q / DAFT-C

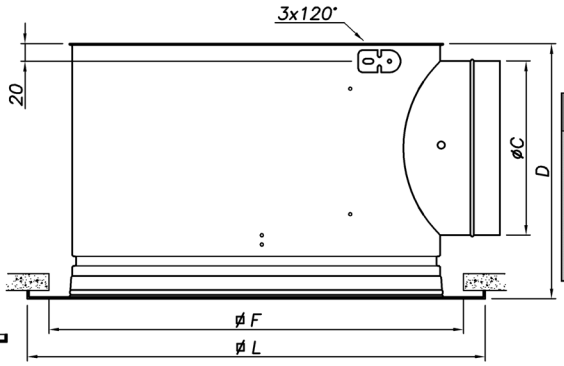




DIFFUSER	L	A	B	C	D	F
300	298	273	260	159	229	283
325	323	273	260	159	229	298
400	398	356	344	199	269	373
500	498	450	438	199	269	473
600	595	553	541	249	319	570
625	623	553	541	249	319	598

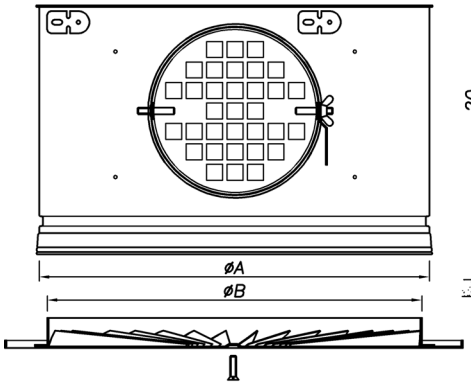
DAFT

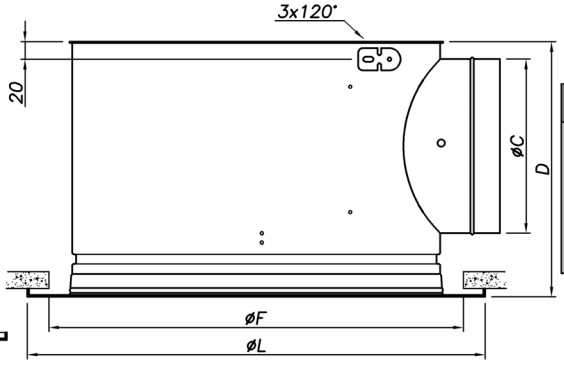




DIFFUSER	L	A	B	C	D	F
300	595	273	260	159	229	283
325		273	260	159	229	298
400		356	344	199	269	373
500		450	438	199	269	473
600		553	541	249	319	570
625		553	541	249	319	598

DAFT-Q

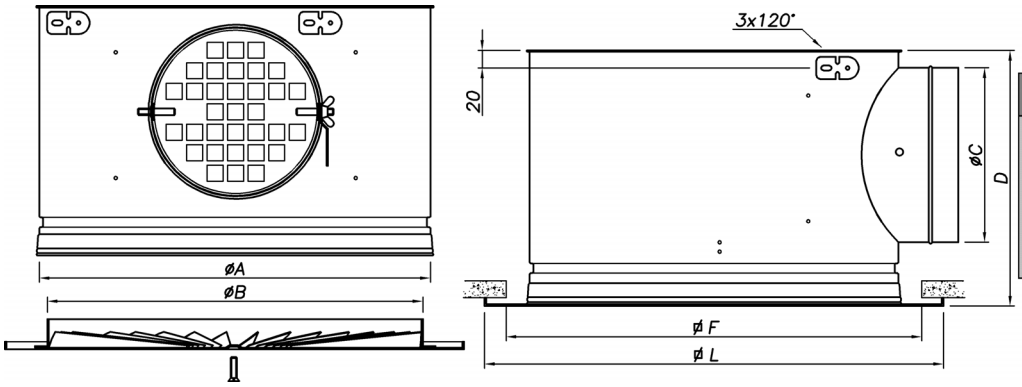




DIFFUSER	ØL	A	B	C	D	ØF
300	298	273	260	159	229	283
325	323	273	260	159	229	298
400	396	356	344	199	269	371
500	498	450	438	199	269	473
600	595	553	541	249	319	570
625	623	553	541	249	319	598

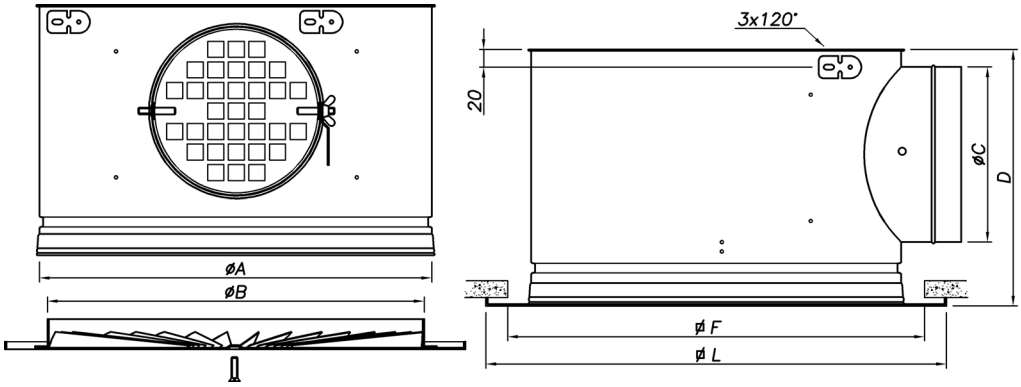
DAFT-C

Models and dimensions: DFRT / DFRT-Q / DFRT-C



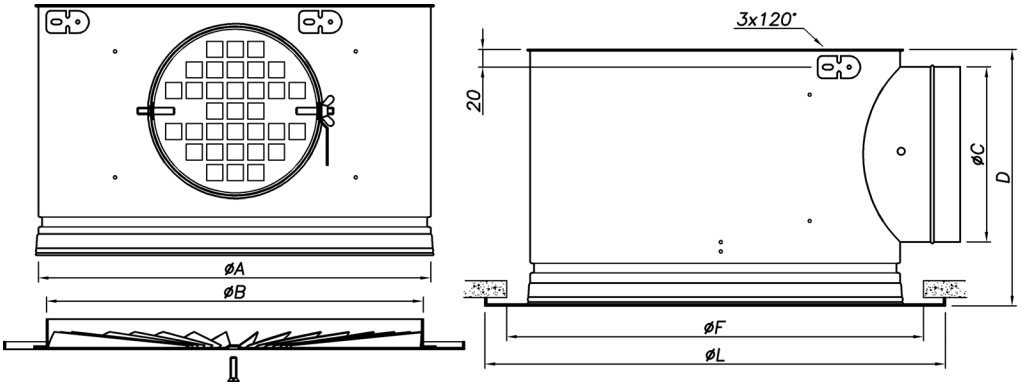
DIFFUSER	L	A	B	C	D	F
300	298	271	260	159	230	276
325	323	302	291	159	230	307
400	398	368	357	199	270	373
500	498	411	400	199	270	416
600	595	544	531	249	320	549
625	623	544	531	249	320	549

DFRT



DIFFUSER	L	A	B	C	D	F
300	595	271	260	159	230	276
325		302	291	159	230	307
400		368	357	199	270	373
500		411	400	199	270	416
600		544	531	249	320	549
625		544	531	249	320	549

DFRT-Q



DIFFUSER	ØL	A	B	C	D	øF
300	298	271	260	159	230	276
325	323	302	291	159	230	307
400	398	368	357	199	270	373
500	498	411	400	199	270	416
600	595	544	531	249	320	549
625	623	544	531	249	320	549

DFRT-C

Technical data. Selection tables: DFRE/Q/C

Q		Dim. [mm]	100	125	160	200	250	315	355	400	500
[m^3/h]	[l/s]	A_k [m^2]	0,0063	0,0099	0,0123	0,0176	0,0226	0,0330	0,0359	0,0500	0,0618
50	13,9	X [m]	0,6								
		L_w - dB(A)	33								
		P_t [Pa]	27								
		V_k [m/s]	2,2								
75	20,8	X [m]	0,9	0,7							
		L_w - dB(A)	44	27							
		P_t [Pa]	62	25							
		V_k [m/s]	3,3	2,1							
100	27,8	X [m]		0,9	0,8						
		L_w - dB(A)		35	26						
		P_t [Pa]		45	18						
		V_k [m/s]		2,8	2,3						
200	55,6	X [m]			1,6	1,4	1,2				
		L_w - dB(A)			46	32	22				
		P_t [Pa]			73	24	9				
		V_k [m/s]			4,5	3,2	2,5				
300	83,3	X [m]				2,1	1,8	1,5			
		L_w - dB(A)				43	33	19			
		P_t [Pa]				55	20	6			
		V_k [m/s]				4,7	3,7	2,5			
400	111,1	X [m]				2,7	2,4	2,0	2,2		
		L_w - dB(A)				51	41	27	23		
		P_t [Pa]				98	36	11	8		
		V_k [m/s]				6,3	4,9	3,4	3,1		
500	138,9	X [m]					3,0	2,5	2,7		
		L_w - dB(A)					48	33	30		
		P_t [Pa]					56	18	12		
		V_k [m/s]					6,1	4,2	3,9		
600	166,7	X [m]					3,6	3,0	3,2	2,7	
		L_w - dB(A)					53	38	35	22	
		P_t [Pa]					80	26	18	9	
		V_k [m/s]					7,4	5,1	4,6	3,3	
800	222,2	X [m]						4,0	4,3	3,7	2,8
		L_w - dB(A)						46	43	30	22
		P_t [Pa]						46	32	16	11
		V_k [m/s]						6,7	6,2	4,4	3,6
1000	277,8	X [m]							5,4	4,6	3,5
		L_w - dB(A)							49	36	28
		P_t [Pa]							50	26	17
		V_k [m/s]							7,7	5,6	4,5
1200	333,3	X [m]								5,5	4,2
		L_w - dB(A)								41	33
		P_t [Pa]								37	24
		V_k [m/s]								6,7	5,4
1400	388,9	X [m]								6,4	5,0
		L_w - dB(A)								46	38
		P_t [Pa]								50	33
		V_k [m/s]								7,8	6,3
1600	444,4	X [m]								7,3	5,7
		L_w - dB(A)								49	41
		P_t [Pa]								66	43
		V_k [m/s]								8,9	7,2
1800	500,0	X [m]									6,4
		L_w - dB(A)									45
		P_t [Pa]									54
		V_k [m/s]									8,1
2000	555,6	X [m]									7,1
		L_w - dB(A)									48
		P_t [Pa]									67
		V_k [m/s]									9,0
2200	611,1	X [m]									7,8
		L_w - dB(A)									50
		P_t [Pa]									81
		V_k [m/s]									9,9

SYMBOLS

A_k	Effective area in m^2
V_k	Effective velocity in m/s
X	Throw for maximum velocity in occupied area of 0,25 m/s, ΔT= 0 K and an installation height of 3 m, considering Coanda effect, in m
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: DFRE-GR + PL / DFRE-GR-Q + PL

Q		Size	100	125	160	200	250	315	355	400	500
(m^3/h)	(l/s)	A_k (m^2)	0,00770	0,0121	0,0199	0,0311	0,0487	0,0774	0,0984	0,1250	0,1956
30	8,3	V_k (m/s)	1,1								
		X (m)	0,4								
		ΔP_t (Pa)	14								
		dB(A)	24								
50	13,9	V_k (m/s)	1,8	1,1							
		X (m)	0,6	0,5							
		ΔP_t (Pa)	38	13							
		dB(A)	37	31							
100	27,8	V_k (m/s)		2,3	1,4	0,9					
		X (m)		1,0	0,7	0,6					
		ΔP_t (Pa)		51	18	7					
		dB(A)		46	35	22					
200	55,6	V_k (m/s)			2,8	1,8	1,1				
		X (m)			1,5	1,2	1,0				
		ΔP_t (Pa)			71	29	11				
		dB(A)			50	38	28				
300	83,3	V_k (m/s)				2,7	1,7	1,1	0,8	0,7	
		X (m)				1,8	1,4	1,1	1,0	0,9	
		ΔP_t (Pa)				64	25	7	6	3	
		dB(A)				48	38	28	24	<20	
400	111,1	V_k (m/s)				3,6	2,3	1,4	1,1	0,9	
		X (m)				2,4	1,9	1,5	1,3	1,2	
		ΔP_t (Pa)				115	45	12	11	6	
		dB(A)				55	45	35	31	26	
500	138,9	V_k (m/s)					2,9	1,8	1,4	1,1	0,7
		X (m)					2,4	1,9	1,7	1,5	1,2
		ΔP_t (Pa)					70	19	18	10	3
		dB(A)					50	40	37	31	21
600	166,7	V_k (m/s)					3,4	2,2	1,7	1,3	0,9
		X (m)					2,9	2,3	2,0	1,8	1,4
		ΔP_t (Pa)					101	28	26	14	4
		dB(A)					55	45	41	35	25
700	194,4	V_k (m/s)						2,5	2,0	1,6	1,0
		X (m)						2,6	2,3	2,1	1,7
		ΔP_t (Pa)						38	35	19	5
		dB(A)						48	45	39	29
850	236,1	V_k (m/s)						3,0	2,4	1,9	1,2
		X (m)						3,2	2,8	2,5	2,0
		ΔP_t (Pa)						56	51	28	8
		dB(A)						53	50	43	34
1000	277,8	V_k (m/s)							2,8	2,2	1,4
		X (m)							3,3	3,0	2,4
		ΔP_t (Pa)							71	38	11
		dB(A)							54	47	38
1500	416,7	V_k (m/s)								3,3	2,1
		X (m)								4,5	3,6
		ΔP_t (Pa)								86	24
		dB(A)								56	48
1800	500,0	V_k (m/s)									2,6
		X (m)									4,3
		ΔP_t (Pa)									35
		dB(A)									53
2000	555,6	V_k (m/s)									2,8
		X (m)									4,8
		ΔP_t (Pa)									43
		dB(A)									55

SYMBOLS

A_k	Effective area in m^2
V_k	Effective velocity in m/s
X	Throw for maximum velocity in occupied area of 0,25 m/s, ΔT= 0 K and an installation height of 3 m, considering Coanda effect, in m
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: DFRE-GR-PR / -Q

Q		Size	125	160	200	250	315	355	400	500
(m^3/h)	(l/s)									
50	13,9	X (m)	0,6							
		V_k (m/s)	0,7							
		ΔP_{tot} (Pa)	11							
		L_W - [dB(A)]	27							
100	27,8	X (m)	1,2	0,8						
		V_k (m/s)	1,3	1,1						
		ΔP_{tot} (Pa)	45	19						
		L_W - [dB(A)]	44	35						
125	34,7	X (m)	1,5	1,0	0,9					
		V_k (m/s)	1,7	1,3	1,1					
		ΔP_{tot} (Pa)	71	29	11					
		L_W - [dB(A)]	49	40	27					
150	41,7	X (m)		1,2	1,1	0,9				
		V_k (m/s)		1,6	1,3	1,1				
		ΔP_{tot} (Pa)		42	15	7				
		L_W - [dB(A)]		45	32	22				
175	48,6	X (m)		1,4	1,2	1,1				
		V_k (m/s)		1,9	1,5	1,2				
		ΔP_{tot} (Pa)		57	21	9				
		L_W - [dB(A)]		48	36	26				
200	55,6	X (m)		1,6	1,4	1,3	1,0			
		V_k (m/s)		2,2	1,7	1,4	1,2			
		ΔP_{tot} (Pa)		75	27	12	6			
		L_W - [dB(A)]		52	40	30	<20			
300	83,3	X (m)			2,1	1,9	1,5	1,3	1,1	
		V_k (m/s)			2,6	2,1	1,8	1,6	1,4	
		ΔP_{tot} (Pa)			61	27	13	8	5	
		L_W - [dB(A)]			51	41	30	25	22	
400	111,1	X (m)				2,5	1,9	1,7	1,5	1,3
		V_k (m/s)				2,8	2,4	2,1	1,9	1,7
		ΔP_{tot} (Pa)				49	24	15	9	7
		L_W - [dB(A)]				49	39	33	29	23
500	138,9	X (m)					2,4	2,2	1,9	1,6
		V_k (m/s)					3,0	2,7	2,4	2,1
		ΔP_{tot} (Pa)					37	23	14	10
		L_W - [dB(A)]					45	40	35	29
600	166,7	X (m)					2,9	2,6	2,3	1,9
		V_k (m/s)					3,7	3,2	2,9	2,5
		ΔP_{tot} (Pa)					53	33	20	15
		L_W - [dB(A)]					50	45	40	34
700	194,4	X (m)						3,0	2,6	2,2
		V_k (m/s)						3,8	3,4	2,9
		ΔP_{tot} (Pa)						45	27	20
		L_W - [dB(A)]						49	44	38
800	222,2	X (m)							3,0	2,6
		V_k (m/s)							3,9	3,3
		ΔP_{tot} (Pa)							35	26
		L_W - [dB(A)]							47	41
900	250,0	X (m)							3,4	2,9
		V_k (m/s)							4,3	3,7
		ΔP_{tot} (Pa)							45	33
		L_W - [dB(A)]							50	44
1000	277,8	X (m)								3,2
		V_k (m/s)								4,1
		ΔP_{tot} (Pa)								41
		L_W - [dB(A)]								47

SYMBOLS

A_k	Effective area in m^2
V_k	Effective velocity in m/s
X	Throw for maximum velocity in occupied area of 0,25 m/s, ΔT= 0 K and an installation height of 3 m, considering Coanda effect, in m
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: DAFC/Q/C

DAFC										
Q		Size	125	160	200	250	315	355	400	500
(m^3/h)	(l/s)	Ak (m^2)	0,00623	0,00804	0,01065	0,01472	0,02138	0,02623	0,03239	0,04870
50	13,9	X (m)	0,7	0,6						
		ΔPt (Pa)	18	7						
		LW - [dB(A)]	30	21						
100	27,8	X (m)	1,3	1,1	0,0	0,8				
		ΔPt (Pa)	75	29	10	4				
		LW - [dB(A)]	49	38	29	20				
150	41,7	X (m)		1,7	1,5	1,3				
		ΔPt (Pa)		65	23	9				
		LW - [dB(A)]		48	38	30				
200	55,6	X (m)			1,0	1,7	1,4	1,3		
		ΔPt (Pa)			42	16	9	5		
		LW - [dB(A)]			45	36	25	21		
250	69,4	X (m)				2,1	1,8	1,6	1,4	
		ΔPt (Pa)				25	14	8	6	
		LW - [dB(A)]				42	31	27	23	
300	83,3	X (m)				2,5	2,1	1,9	1,7	
		ΔPt (Pa)				36	20	12	8	
		LW - [dB(A)]				46	36	31	28	
350	97,2	X (m)				2,0	2,5	2,2	1,0	1,6
		ΔPt (Pa)				50	28	17	12	6
		LW - [dB(A)]				49	40	35	32	23
400	111,1	X (m)					2,8	2,5	2,3	1,9
		ΔPt (Pa)					37	22	15	8
		LW - [dB(A)]					44	39	35	27
450	125,0	X (m)					3,2	2,9	2,6	2,1
		ΔPt (Pa)					46	28	20	10
		LW - [dB(A)]					47	42	38	30
500	138,9	X (m)					3,5	3,2	2,9	2,3
		ΔPt (Pa)					57	35	24	12
		LW - [dB(A)]					49	44	41	32
550	152,8	X (m)						3,5	3,1	2,6
		ΔPt (Pa)						43	30	15
		LW - [dB(A)]						47	43	35
600	166,7	X (m)						3,8	3,4	2,8
		ΔPt (Pa)						51	35	18
		LW - [dB(A)]						49	46	37
700	194,4	X (m)							3,0	3,3
		ΔPt (Pa)							48	25
		LW - [dB(A)]							49	41
800	222,2	X (m)								3,7
		ΔPt (Pa)								32
		LW - [dB(A)]								45
900	250,0	X (m)								4,2
		ΔPt (Pa)								41
		LW - [dB(A)]								48

SYMBOLS

A_k	Effective area in m^2
V_k	Effective velocity in m/s
X	Throw for maximum velocity in occupied area of 0,25 m/s, ΔT= 0 K and an installation height of 3 m, considering Coanda effect, in m
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: HDPR/Q/C

HDPR									
Q		Size	125	160	200	250	315	355	400
(m³/h)	(l/s)	A_k (m²)	0,0089	0,0103	0,0136	0,0212	0,0405	0,0599	0,0909
50	13,9	V_k (m/s)	1,6	1,3					
		X (m)	1,6	1,5					
		ΔP_t (Pa)	7	5					
		dB(A)	21	<20					
100	27,8	V_k (m/s)	3,1	2,7	2,0	1,3			
		X (m)	3,2	2,9	2,6	2,0			
		ΔP_t (Pa)	29	20	10	3			
		dB(A)	39	33	26	<20			
150	41,7	V_k (m/s)	4,7	4,0	3,1	1,0	1,0		
		X (m)	4,8	4,4	3,8	3,1	2,2		
		ΔP_t (Pa)	66	47	23	7	2		
		dB(A)	50	44	36	21	<20		
200	55,6	V_k (m/s)		5,4	4,1	2,6	1,4		
		X (m)		5,9	5,1	4,1	2,0		
		ΔP_t (Pa)		83	41	13	4		
		dB(A)		51	44	28	20		
300	83,3	V_k (m/s)			6,1	3,9	2,1	1,4	
		X (m)			7,7	6,1	4,4	3,7	
		ΔP_t (Pa)			94	29	11	6	
		dB(A)			55	39	31	23	
400	111,1	V_k (m/s)				5,2	2,7	1,9	1,2
		X (m)				8,2	5,9	4,9	3,0
		ΔP_t (Pa)				52	19	10	4
		dB(A)				47	39	31	25
500	138,9	V_k (m/s)					3,4	2,3	1,5
		X (m)					7,4	6,1	4,9
		ΔP_t (Pa)					30	16	7
		dB(A)					46	37	31
600	166,7	V_k (m/s)					4,1	2,8	1,8
		X (m)					8,9	7,3	5,9
		ΔP_t (Pa)					44	24	10
		dB(A)					51	42	36
700	194,4	V_k (m/s)						3,2	2,1
		X (m)						8,5	6,9
		ΔP_t (Pa)						32	13
		dB(A)						47	40
800	222,2	V_k (m/s)						3,7	2,4
		X (m)						9,8	7,9
		ΔP_t (Pa)						42	18
		dB(A)						51	44
900	250,0	V_k (m/s)							2,7
		X (m)							8,9
		ΔP (Pa)							22
		dB(A)							47

SYMBOLS

A_k	Effective area in m^2
V_k	Effective velocity in m/s
X	Throw for maximum velocity in occupied area of 0,25 m/s, ΔT= 0 K and an installation height of 3 m, considering Coanda effect, in m
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: DAFT/Q/C

DAFT																
Q		Size		325			400			500			600		
m³/h	l/s	X		0.6	1.5	2.1	0.6	1.5	2.1	0.6	1.5	2.1	0.6	1.5	2.1
80	22,2	V_Z	H = 2,7	0,14	0,09	0,07									
			H = 3,2	0,11	0,07	0,06									
			H = 3,8	0,08	0,06	0,05									
		ΔP_t		4											
		L_{WA}		20											
100	27,8	V_Z	H = 2,7	0,18	0,11	0,09	0,13	0,08	0,07						
			H = 3,2	0,13	0,09	0,08	0,10	0,07	0,06						
			H = 3,8	0,10	0,08	0,07	0,08	0,06	0,05						
		ΔP_t		7			1								
		L_{WA}		26			<15								
150	41,7	V_Z	H = 2,7	0,27	0,17	0,13	0,20	0,12	0,10	0,16	0,10	0,08			
			H = 3,2	0,20	0,14	0,12	0,15	0,10	0,08	0,12	0,08	0,07			
			H = 3,8	0,16	0,12	0,10	0,11	0,08	0,07	0,09	0,07	0,06			
		ΔP_t		17			4			2					
		L_{WA}		36			18			<15					
200	55,6	V_Z	H = 2,7	0,36	0,22	0,18	0,26	0,16	0,13	0,22	0,13	0,11	0,18	0,12	0,09
			H = 3,2	0,27	0,19	0,15	0,20	0,13	0,11	0,16	0,11	0,09	0,14	0,10	0,08
			H = 3,8	0,21	0,15	0,13	0,15	0,11	0,10	0,12	0,09	0,08	0,11	0,08	0,07
		ΔP_t		30			7			4			2		
		L_{WA}		43			25			17			<15		
250	69,4	V_Z	H = 2,7	0,45	0,28	0,22	0,33	0,20	0,16	0,27	0,17	0,13	0,23	0,14	0,12
			H = 3,2	0,34	0,23	0,19	0,24	0,17	0,14	0,20	0,14	0,12	0,17	0,12	0,10
			H = 3,8	0,26	0,19	0,16	0,19	0,14	0,12	0,16	0,12	0,10	0,13	0,10	0,08
		ΔP_t		47			12			7			3		
		L_{WA}		48			30			23			15		
300	83,3	V_Z	H = 2,7	0,54	0,34	0,27	0,39	0,24	0,20	0,32	0,20	0,16	0,28	0,17	0,14
			H = 3,2	0,40	0,28	0,23	0,29	0,20	0,17	0,24	0,17	0,14	0,21	0,14	0,12
			H = 3,8	0,31	0,23	0,20	0,23	0,17	0,14	0,19	0,14	0,12	0,16	0,12	0,10
		ΔP_t		68			17			10			5		
		L_{WA}		53			35			27			20		
400	111,1	V_Z	H = 2,7				0,52	0,33	0,26	0,43	0,27	0,22	0,37	0,23	0,18
			H = 3,2				0,39	0,27	0,22	0,32	0,22	0,18	0,28	0,19	0,16
			H = 3,8				0,30	0,22	0,19	0,25	0,18	0,16	0,21	0,16	0,14
		ΔP_t					30			18			9		
		L_{WA}					42			34			27		
500	138,9	V_Z	H = 2,7				0,65	0,41	0,33	0,54	0,34	0,27	0,46	0,29	0,23
			H = 3,2				0,49	0,34	0,28	0,40	0,28	0,23	0,35	0,24	0,20
			H = 3,8				0,38	0,28	0,24	0,31	0,23	0,20	0,27	0,20	0,17
		ΔP_t					48			28			14		
		L_{WA}					47			40			32		
600	166,7	V_Z	H = 2,7				0,78	0,49	0,39	0,65	0,40	0,32	0,55	0,35	0,28
			H = 3,2				0,59	0,40	0,33	0,48	0,33	0,28	0,42	0,29	0,24
			H = 3,8				0,45	0,33	0,29	0,37	0,28	0,24	0,32	0,24	0,20
		ΔP_t					69			40			21		
		L_{WA}					52			44			37		
700	194,4	V_Z	H = 2,7							0,75	0,47	0,38	0,65	0,40	0,32
			H = 3,2							0,56	0,39	0,32	0,48	0,33	0,28
			H = 3,8							0,43	0,32	0,28	0,37	0,28	0,24
		ΔP_t								55			29		
		L_{WA}								48			40		
800	222,2	V_Z	H = 2,7							0,86	0,54	0,43	0,74	0,46	0,37
			H = 3,2							0,65	0,45	0,37	0,55	0,38	0,32
			H = 3,8							0,50	0,37	0,31	0,43	0,32	0,27
		ΔP_t								72			38		
		L_{WA}								51			44		
1000	277,8	V_Z	H = 2,7										0,92	0,58	0,46
			H = 3,2										0,69	0,48	0,40
			H = 3,8										0,53	0,40	0,34
		ΔP_t											59		
		L_{WA}											49		

SYMBOLS

A_k	Effective area in m^2
V_Z	Velocity in occupied area, in m/s
X	Distance between diffuser axes, in m.
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Technical data. Selection tables: DFRT/Q/C

DFRT																
Q		Size		325			400			500			600		
m³/h	l/s	X		0.6	1.5	2.1	0.6	1.5	2.1	0.6	1.5	2.1	0.6	1.5	2.1
80	22,2	V_z	H = 2,7	0,12	0,07	0,06									
			H = 3,2	0,09	0,06	0,05									
			H = 3,8	0,07	0,05	0,04									
		ΔP_t		3											
		L_{WA}		<15											
100	27,8	V_z	H = 2,7	0,14	0,09	0,07	0,11	0,07	0,06						
			H = 3,2	0,11	0,07	0,06	0,08	0,06	0,05						
			H = 3,8	0,08	0,06	0,05	0,06	0,05	0,04						
		ΔP_t		5			2								
		L_{WA}		19			<15								
150	41,7	V_z	H = 2,7	0,22	0,14	0,11	0,17	0,10	0,08	0,13	0,08	0,07			
			H = 3,2	0,16	0,11	0,09	0,13	0,09	0,07	0,10	0,07	0,06			
			H = 3,8	0,12	0,09	0,08	0,10	0,07	0,06	0,08	0,06	0,05			
		ΔP_t		13			4			2					
		L_{WA}		29			17			<15					
200	55,6	V_z	H = 2,7	0,29	0,18	0,14	0,22	0,14	0,11	0,18	0,11	0,09	0,14	0,09	0,07
			H = 3,2	0,22	0,15	0,12	0,17	0,12	0,10	0,13	0,09	0,08	0,10	0,07	0,06
			H = 3,8	0,17	0,12	0,11	0,13	0,10	0,08	0,10	0,08	0,06	0,08	0,06	0,05
		ΔP_t		23			8			4			1		
		L_{WA}		35			24			17			<15		
250	69,4	V_z	H = 2,7	0,36	0,23	0,18	0,28	0,17	0,14	0,22	0,14	0,11	0,17	0,11	0,09
			H = 3,2	0,27	0,19	0,15	0,21	0,14	0,12	0,17	0,11	0,09	0,13	0,09	0,07
			H = 3,8	0,21	0,15	0,13	0,16	0,12	0,10	0,13	0,09	0,08	0,10	0,07	0,06
		ΔP_t		36			13			6			2		
		L_{WA}		40			29			22			<15		
300	83,3	V_z	H = 2,7	0,43	0,27	0,22	0,34	0,21	0,17	0,26	0,17	0,13	0,21	0,13	0,10
			H = 3,2	0,32	0,22	0,19	0,25	0,17	0,14	0,20	0,14	0,11	0,16	0,11	0,09
			H = 3,8	0,25	0,19	0,16	0,19	0,14	0,12	0,15	0,11	0,10	0,12	0,09	0,08
		ΔP_t		52			18			9			3		
		L_{WA}		44			33			26			17		
400	111,1	V_z	H = 2,7	0,58	0,36	0,29	0,45	0,28	0,22	0,35	0,22	0,18	0,28	0,17	0,14
			H = 3,2	0,43	0,30	0,25	0,34	0,23	0,19	0,26	0,18	0,15	0,21	0,14	0,12
			H = 3,8	0,33	0,25	0,21	0,26	0,19	0,16	0,20	0,15	0,13	0,16	0,12	0,10
		ΔP_t		94			33			17			6		
		L_{WA}		51			40			33			24		
500	138,9	V_z	H = 2,7				0,56	0,35	0,28	0,44	0,28	0,22	0,35	0,22	0,17
			H = 3,2				0,42	0,29	0,24	0,33	0,23	0,19	0,26	0,18	0,15
			H = 3,8				0,32	0,24	0,20	0,25	0,19	0,16	0,20	0,15	0,13
		ΔP_t					52			26			10		
		L_{WA}					45			38			29		
600	166,7	V_z	H = 2,7				0,67	0,42	0,34	0,53	0,33	0,26	0,42	0,26	0,21
			H = 3,2				0,50	0,35	0,29	0,40	0,27	0,23	0,31	0,22	0,18
			H = 3,8				0,39	0,29	0,25	0,30	0,23	0,19	0,24	0,18	0,15
		ΔP_t					75			38			14		
		L_{WA}					49			42			33		
800	222,2	V_z	H = 2,7							0,70	0,44	0,35	0,56	0,35	0,28
			H = 3,2							0,53	0,36	0,30	0,42	0,29	0,24
			H = 3,8							0,41	0,30	0,26	0,32	0,24	0,20
		ΔP_t								68			26		
		L_{WA}								49			40		
1000	277,8	V_z	H = 2,7										0,69	0,43	0,35
			H = 3,2										0,52	0,36	0,30
			H = 3,8										0,40	0,30	0,25
		ΔP_t											41		
		L_{WA}											45		

SYMBOLS

A_k	Effective area in m^2
V_z	Velocity in occupied area, in m/s
X	Distance between diffuser axes, in m.
P_t	Total pressure drop, in Pa
L_w	Sound power level, in dB(A)

Product code

The product code shown below is used to define both the diffuser as well as the plenum:

DFRE	Fixed blade swirl diffuser
DFRE-Q	Fixed blade swirl diffuser in plate size 595 x 595 mm
DFRE-C	Circular fixed blade swirl diffuser
DFRE-GR	Circular fixed blade swirl diffuser
DFRE-GR-PR	Fixed blade swirl diffuser integrated in a perforated plate
DFRE-GR-PR-Q	Fixed blade swirl diffuser integrated in a perforated plate of 595 x 595 mm
DAFC	Circular fixed curved blade swirl diffuser
DAFC-Q	Circular fixed curved blade swirl diffuser in plate size 595 x 595 mm
DAFC-C	Circular fixed curved blade swirl diffuser
HDPR	Fixed blade swirl diffuser integrated in perforated plate of special design
HDPR-C	Circular fixed blade swirl diffuser integrated in perforated plate of special design
HDPR-Q	Fixed blade swirl diffuser integrated in perforated plate of special design of 595 x 595 mm
DAFT	Fixed blade swirl diffuser
DAFT-C	Circular fixed blade swirl diffuser
DAFT-Q	Fixed blade swirl diffuser in plate size 595 x 595 mm
DFRT	Fixed blade swirl diffuser
DFRT-C	Circular fixed blade swirl diffuser
DFRT-Q	Fixed blade swirl diffuser in plate size 595 x 595 mm
E	Plaster ceiling plate
Ø (125...500)	Size
RAL 9010 RAL	Painted in RAL 9010 Special finishes available upon request

PD-RE.	With removable plenum box with side connection, internally non-insulated, made in galvanised steel sheet, with manual damper accesible from false ceiling.
PDA-RE.	With removable plenum box with side connection, internally insulated, made in galvanised steel sheet, with manual damper accesible from false ceiling.
PD-RL.	With removable plenum box with side connection, internally non-insulated, made in galvanised steel sheet, with manual damper accesible from room.
PDA-RL.	With removable plenum box with side connection, internally insulated, made in galvanised steel sheet, with manual damper accesible from room.
PE-45	Polystyrene plenum box for diffusers with plate of 595 x 595 mm

Example:

DFRE-Q- E-Ø315 RAL 9010

Fixed blade swirl diffuser in plate size 600 x 600 mm, size 315 mm coated in white RAL 9010.

KOOLAIR, S.L.
Calle Urano, 26
Poligono industrial nº 2 – La Fuensanta
28936 Móstoles - Madrid - (España)
Tel: +34 91 645 00 33
Fax: +34 91 645 69 62
e-mail: info@koolair.com

www.koolair.com