

Diffusers

for walls, ceiling, & floors



Series GSL Linear Slot Diffuser



Linear Slot Diffuser has been designed to meet the exacting performance requirements and standards of modern slot diffuser applications. Combining up to date styling and design technology to blend with modern architecture the GSL maintains excellent air distribution characteristics providing smooth, accurate and flexible airflow control making the unit suitable for both fan coil, VAV and conventional Linear Slot applications.

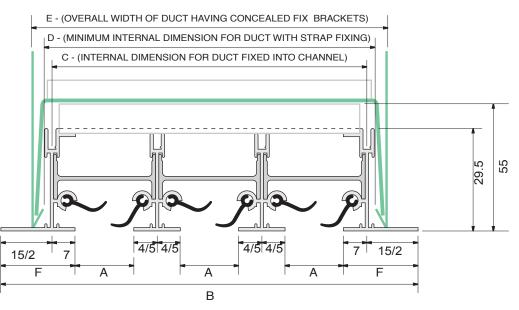
Construction

From extruded aluminium sections, with cylindrical, black or white plastic nozzles.

Size

Height of slot diffuser is determined by the number of slots, usually to a maximum of 8 slots. The slot diffuser is designed to form long continuous lengths but is also effective in short sections.





Slot 20

No. of						
Slots	Α	В	С	D	E	F
1	20	70	34	48	56	22
2	20	110	74	88	96	22
3	20	150	114	128	136	22
4	20	190	154	168	176	22
5	20	230	194	208	216	22
6	20	270	134	248	256	22
7	20	310	174	288	296	22
8	20	350	314	328	336	22

Slot 25

No. of						
Slots	Α	В	С	D	E	F
1	25	75	39	53	61	25
2	25	120	84	98	106	25
3	25	165	129	143	151	25
4	25	210	174	188	196	25
5	25	255	219	233	241	25
6	25	300	264	278	268	25
7	25	345	309	323	301	25
8	25	390	354	368	376	25

Series DG Multi-Cone Ceiling Diffuser



For supply or extract air. Multi-cone design with quick release core and 2 position setting for heating and cooling. Flanged for surface mounting or lay-in ceiling grid.

Construction

For extruded aluminium cores offering the benefit of hair line mitre joints. Optional OBD is extruded aluminium.

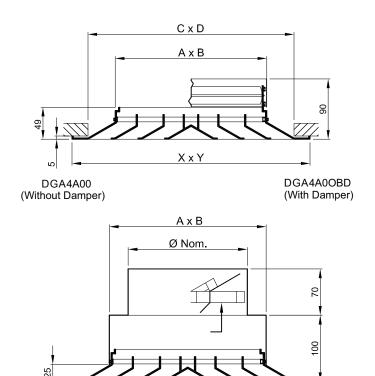
Size

Neck size are available 150mm x 150mm to 450mm x 450mm.

How to Specify

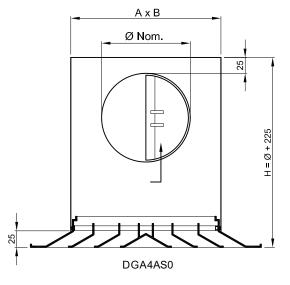
State Quantity, the series, product coding and the size width x height e.g 10 Qty. DGA4W00BD+1X 450 x 450

Series	F	rame Style	Core		Options		Accessories			Fixings		Finish	
DG	Α	Aluminium	4A	4 – Way	0	None	0	None		1	Neck Fixings	х	PPC /RAL 9010 White
			3A	Blanked to 3 - Way	Т	Top Inlet Plenum	OBD	Opposed Blade Damper	+	2	Lay-in Tile Replacer	Υ	PPC BS/Ral Colour
			2A	Blanked to 2 –way	s	Side Inlet Plenum	TBD	Twin Blade Damper					
			1A	Blanked to 1 - way									



DGA4AT0

AxB	C x D	ХхY
150 x 150	250 x 250	290 x 290
225 x 225	325 x 325	365 x 365
300 x 300	400 x 400	440 x 440
450 x 450	550 x 550	595 x 595



Series D Multi-Cone Ceiling Diffuser Set Into Lay-in Ceiling Panel



For supply or extract air, multi-cone design with quick release core and 2 position setting for heating and cooling. Available in a range of different core styles and sizes giving total flexibility for installation in lay in ceiling tile applications.

Construction

For extruded aluminium sections, set into a zintec steel panel, outer frame and inner cores 1.6mm thick. Hairline mitres mechanically held. Optional OBD is extruded aluminium.

Size

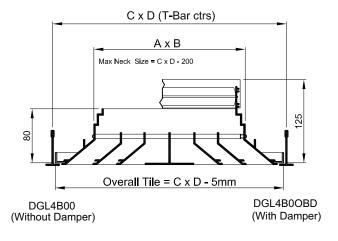
Sizes to suit 600mm x 600mm ceiling grid arrangements.

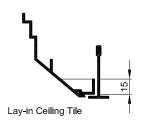
How to Specify

State Quantity, the series, product coding and the size width x height e.g Qty. DG4BSOBD+2X 595 x 595 10

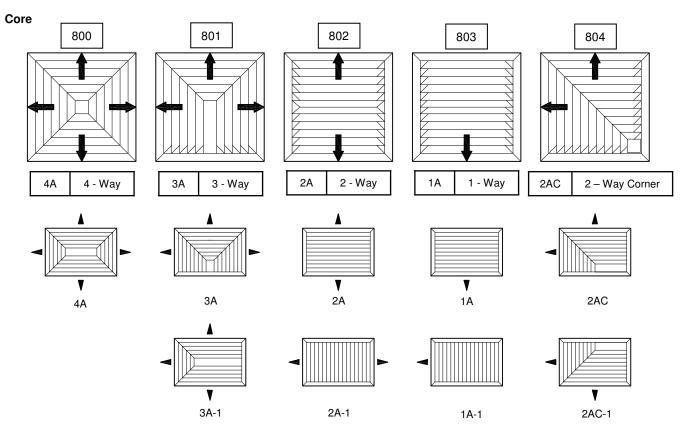


Series	F	rame Style	Core		Options		Accessories				Fixing		Finish
DG	L	Lay-in Ceiling Tile	4B	4 – Way	0	None	0	None		1	Lay-in Tile Replacer	Х	PPC /RAL 9010 White
			3B	3 - Way	т	Top Inlet Plenum	OBD	Opposed Blade Damper	+			z	Mill Finish
			2B	2 -way	s	Side Inlet Plenum	TBD	Twin Blade Damper					
			1B	1 - way									



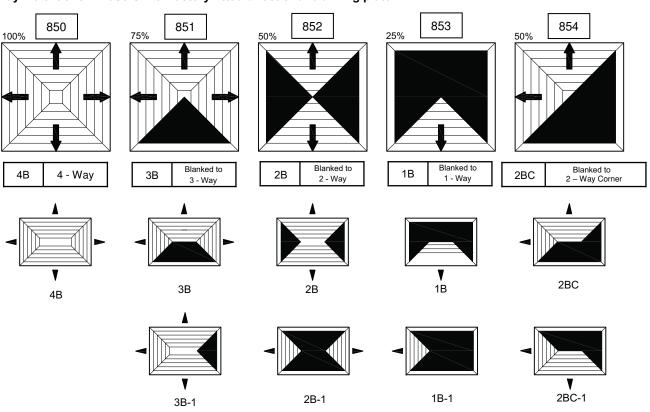


Multi-Cone Ceiling Diffusers Core Options



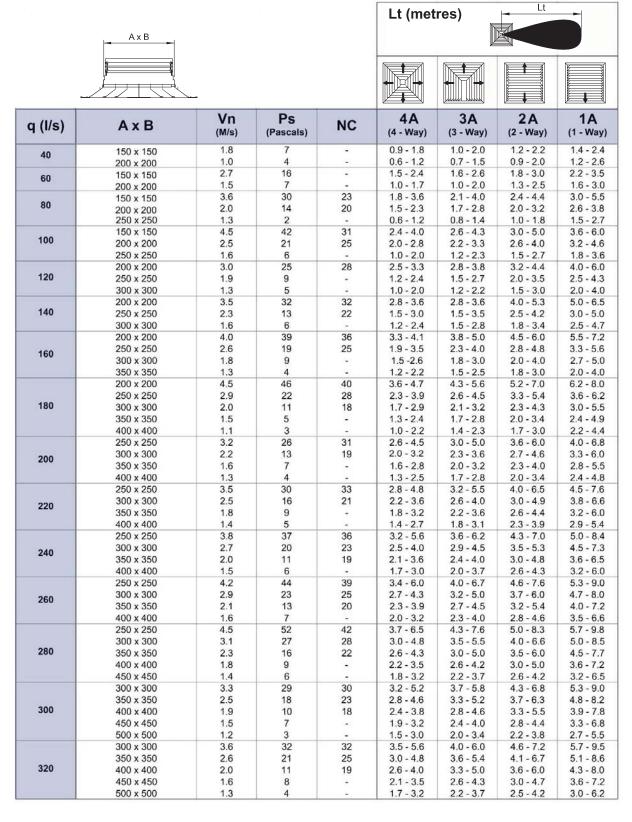
All throw patterns as viewed on rear of diffuser neck.

4 - Way Multi Cone Diffusers with factory fitted directional blanking plate



All throw patterns as viewed on rear of diffuser neck. Copy right © - All rights reserved by IGC





Series DG Technical Data Multi-Cone Diffusers

Vn

(M/s)

3.8

2.8

2.1

1.7

4.0

3.0

2.3

1.8

1.5

1.0

4.2

3.1

2.4

1.9

1.5

1.1

4.5

3.3

2.5

2.0

1.6

1.1

3.4

2.6

2.1

1.7

1.2

3.7

2.8

2.2

1.8

1.3

3.1

2.5

2.0

1.4

3.4

2.7

2.2

1.5

3.0

2.4

1.7

32

2.6

1.8

2.8

2.0

3.0

2.1

3.2

2.2

2.8

Ps

(Pascals)

36

24

13

10

5

42

27

16

12

7

4

47

30

18

14

8

4

54

33

21

16

10

4

36

23

17

11

5

40

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19

12

5

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17

32

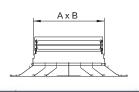
19

35

22

33





AxB

300 x 300

350 x 350

400 x 400

450 x 450

500 x 500

300 x 300

350 x 350 400 x 400

450 x 450

500 x 500

600 x 600

300 x 300

350 x 350

400 x 400

450 x 450

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600 x 600

400 x 400

450 x 450

500 x 500

600 x 600

450 x 450

500 x 500

600 x 600

450 x 450

500 x 500

600 x 600

600 x 600

q (I/s)

340

360

380

400

420

450

500

550

600

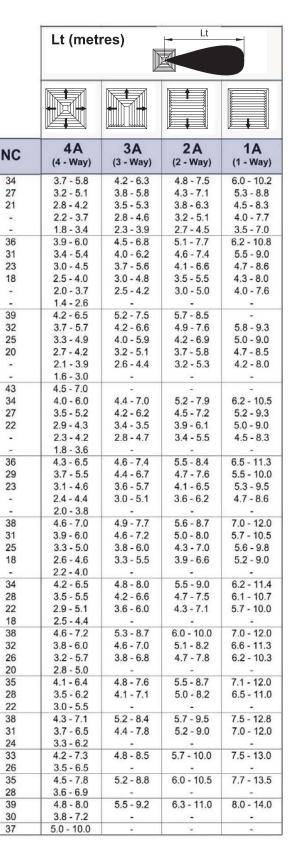
650

700

750

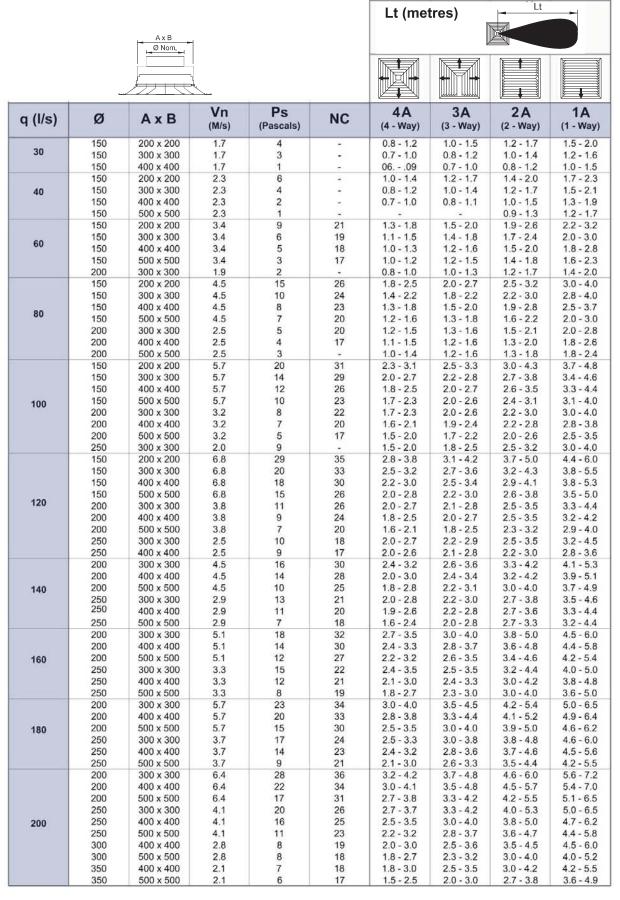
800

1000

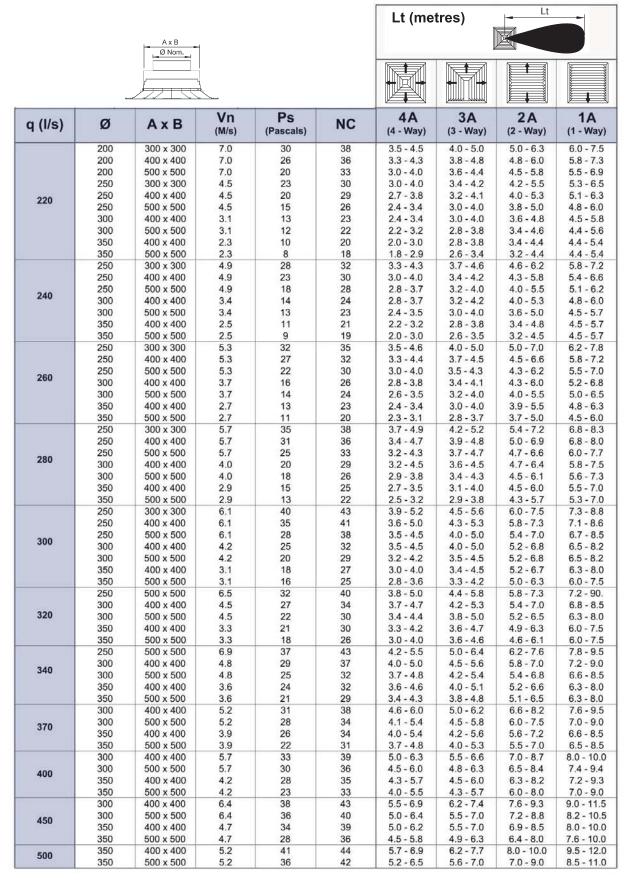


Series DG Technical Data Multi-Cone Diffusers



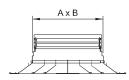


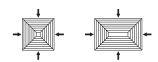
Series DG Technical Data Multi-Cone Diffusers



Series DG Technical Data Multi-Cone Diffusers (Extract)







AxB	Nomenclature	Vn (Ms) 1.0	Vn (Ms) 1.25	Vn (Ms) 1.50	Vn (Ms) 1.75	Vn (Ms) 2.0	Vn (Ms) 2.25	Vn (Ms) 2.50	Vn (Ms) 2.75	Vn (Ms 3.0
	q (I/s)	(5)	30	35	40	45	50	55	60	65
150 x 150	Psn (Pa)		9	9	11	13	18	21	24	30
An .0225 M ²	Vf (M/s)		.52	.60	.69	.78	.87	.95	1.04	1.13
	NC		-	7	-	7	-	17	20	23
	q (l/s)	40	50	60	70	80	90	100	110	120
200 x 200	Psn (Pa)	9	10	10	13	16	20	24	29	36
An .04 M ²	Vf (M/s)	.48	.59	.71	.83	.95	1.07	1.19	1.30	1.43
	NC		-	-	17	18	19	21	22	25
	q (l/s)	45	55	70	80	90	100	110	120	130
300 x 150	Psn (Pa)	9	10	10	14	20	25	30	35	43
An .045 M ²	Vf (M/s)	.48	.59	.75	.85	.96	1.07	1.18	1.28	1.39
	NC	-	-	17	18	19	20	23	26	28
	q (l/s)	65	80	95	110	125	140	155	170	185
250 x 250	Psn (Pa)	9	10	10	12	17	21	25	30	35
An .0625 M ²	Vf (M/s)	.56	.69	.82	.95	1.08	1.21	1.34	1.47	1.60
	NC		-	-	-	18	21	24	28	30
	q (l/s)	70	85	100	115	135	150	170	185	200
450 x 150	Psn (Pa)	12	15	18	23	31	39	47	55	66
An .0675 M ²	Vf (M/s)	.54	.65	.77	.88	1.04	1.15	1.31	1.42	1.54
341176.17.11077.40170.4	NC			-	-	18	21	24	28	30
	q (l/s)	90	115	135	160	180	200	225	245	270
300 x 300	Psn (Pa)	9	10	11	13	17	21	24	29	35
An .09 M ²	Vf (M/s)	.59	.76	.89	1.05	1.18	1.31	1.48	1.61	1.78
	NC	-	-	17	18	21	24	28	32	34
	q (l/s)	100	125	150	175	200	225	250	275	300
500 x 200	Psn (Pa)	11	12	14	19	25	30	36	43	52
An .010 M ²	Vf (M/s)	.59	.74	.88	1.03	1.18	1.32	1.47	1.61	1.75
	NC	-	-	17	19	21	24	28	33	35
	q (l/s)	120	150	185	215	245	275	305	335	365
350 x 350	Psn (Pa)	11	12	14	18	23	28	34	39	46
An .1225 M ²	Vf (M/s)	.62	.74	.96	1.11	1.27	1.42	1.58	1.73	1.89
	NC			16	18	22	25	29	33	37
	q (l/s)	135	165	200	235	270	300	335	370	405
450 x 300	Psn (Pa)	11	11	13	17	22	27	33	39	47
An .135 M ²	Vf (M/s)	.64	.79	.95	1.12	1.29	1.43	1.60	1.76	1.92
	NC	-	-	17	19	22	25	29	33	37
	q (I/s)	160	200	240	280	320	360	400	440	480
400 x 400	Psn (Pa)	11	12	14	18	24	31	37	43	52
An .16 M ²	Vf (M/s)	.66	.83	1.0	1.16	1.33	1.50	1.66	1.83	2.0
	NC	75.	17	19	20	23	25	30	35	39
	q (I/s)	180	225	270	315	360	400	450	495	540
600 x 300	Psn (Pa)	12	13	17	22	31	38	46	54	64
An .18 M ²	Vf (M/s)	.66	.83	1.0	1.17	1.34	1.49	1.67	1.84	2.0
	NC	17	18	20	22	26	29	34	36	41
1974F0 - 1775 A10 1	q (I/s)	200	250	300	350	400	450	500	550	600
450 x 450	Psn (Pa)	12	13	17	21	27	34	41	48	57
An .2025 M ²	Vf (M/s)	.68	.86	1.03	1.20	1.37	1.54	1.71	1.90	2.07
	NC	18	20	21	23	28	32	36	38	42
	q (I/s)	250	310	375	435	500	560	625	685	750
500 x 500	Psn (Pa)	12	14	17	21	27	34	42	49	59
An .25 M ²	Vf (M/s)	.71	.89	1.08	1.25	1.44	1.61	1.80	1.97	2.16
	NC ((18	20	22	25	30	34	37	40	45
	q (I/s)	300	375	450	525	600	675	750	830	905
550 x 550	Psn (Pa)	12	14	18	23	31	38	46	54	65
An .3025 M ²	Vf (M/s)	.73	.91	1.10	1.28	1.46	1.65	1.83	2.02	2.20
	NC	19	21	23	27	33	36	38	42	47
	q (I/s)	360	450	540	630	720	810	900	990	1080
600 x 600	Psn (Pa)	13	16	21	26	35	41	47	56	67
An .36 M ²	Vf (M/s)	.76	.95	1.13	1.32	1.51	1.70	1.89	2.08	2.27
	NC	21	23	25	29	35	39	43	45	48

Series GRC Fixed Circular Diffusers



Description

For supply or extract air, fixed blade multicone ceiling diffuser with countersunk flange holes for easy fixing. Suitable for ceiling and duct mounting.

Construction

From presses mild steel outer frame and inner cores. Optional damper has twin blades with opposed action operated via screwdriver through the face of diffuser.

Size

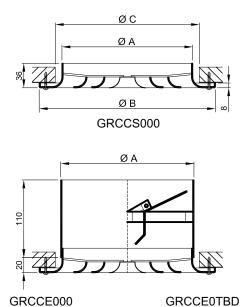
From 160mm dia. To 315mm dia. Neck sizes.

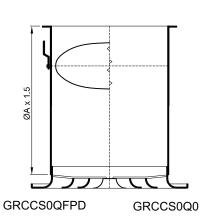
How to Specify

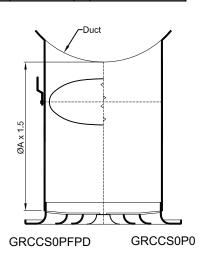
State Quantity, the series, product coding and the size width x height e.g 10 Qty. GRCCSE0TBD+1X 315 \emptyset



Series	Fra	me Style	Options		Options		Accessories				Fixing		Finish
GRC	cs	Circular Steel	0	None	0	None	0	None		1	Flanges Holes	х	PPC /RAL 9010 Gloess White
			Е	Extended Neck Collar	Q	Square Duct Plenum	TBD	Twin Blade Damper	+			Υ	PPC BS/Ral Colour
					Р	Spiral Duct Plenum	FPD	Flat Plate Damper					







Series GRC Technical Data Fixed Pattern Circular



Fixed Pattern Diffuser

The 'CS000' is an effective and efficient 'low-cost' celing diffuser. Suitable for cooling temperature differentials (Td) to - 14° and heating Td to +30°. An ideal product for low ceiling installations. Fixed tamperproof cone assembly. The optional twin blade opposed action volume control damper is allen key operated via the diffuser centre cone.

Performance Data

Values are based upon a 2.7 metre high ceiling flush and free of obtrusions, a temperature differential of 10°C and the rear volume control damper set in the fully open position.

Noise Criteria

Noise ratings in the form of 'NC' levels are given in the performance Tables and are based on an 8dB deduction for average room Absorption and sound power level (LW) 10^{-12} W.

Damper influence

Data includes the fitting of rear twin blade (opposed action) damper set in the fully open position. Harsh throttling of the damper may adversely affect pressure drop and noise and should be avoided. Should a rear volume control damper not be required the resultant reduction in pressure drop and noise rating will be:

Ps x 0.85 NC -5

ØA	An	AK					Vn(M/s)			
Ø A	(M²)	(M²)	No menciature	2.0	2.5	3.0	3.5	4.0	4.5	5.0
- 1			q (I/s)	30	40	50	60	70	80	-
Ø 150	0.016	0.011	Lt (meters)	0.7	0.9 - 1.5	1.0 - 1.8	1.2 - 1.8	1.5 - 2.0	1.7 - 2.6	÷0
Ø 150	0.016	0.011	Ps (Pascals)	8	9	12	17	23	32	
			NC		16	21	26	32	40	
			q (I/s)	70	80	90	100	110	120	140
Ø 200	0.028	0.020	Lt (meters)	0.9 - 1.5	1.2 - 1.8	1.4 - 2.2	1.5 - 2.4	1.8 - 2.6	2.0 - 3.0	2.3 - 3.4
W 200	0.028	0.020	Ps (Pascals)	8	11	14	17	21	25	33
	9		NC	15	21	25	28	32	37	42
			q (l/s)	100	120	140	160	180	200	220
d ar a	0.045	0.024	Lt (meters)	1.0 - 1.7	1.4 - 2.2	1.7 - 2.6	1.8 - 3.0	2.2 - 3.3	2.4 - 3.8	2.6 - 4.2
Ø 250	0.045	0.031	Ps (Pascals)	7	9	13	17	19	23	27
			NC	16	22	27	32	35	39	42
			q (I/s)	140	170	210	240	270	300	330
d 200	0.055	0.045	Lt (meters)	1.5 - 2.1	1.8 - 2.7	2.1 - 3.0	2.4 - 3.3	2.6 - 3.7	2.9 - 4.3	3.5 - 5.
Ø 300	0.065	0.045	Ps (Pascals)	6	8	14	18	21	28	33
			NC	16	22	27	32	35	39	42
			q (I/s)	170	210	250	290	330	370	410
		0.054	Lt (meters)	1.7 - 2.6	2.1 - 2.9	2.5 - 3.4	2.9 - 4.0	3.1 - 4.3	3.4 - 4.8	3.9 - 5.
Ø 350	0.087	0.061	Ps (Pascals)	6	7	13	18	20	25	30
		-110	NC	17	23	29	34	38	40	43
			q (I/s)	200	250	300	350	400	450	500
d		0.000	Lt (meters)	2.0 - 2.9	2.4 - 3.3	2.9 - 3.8	3.4 - 4.5	3.7 - 5.0	4.0 - 5.2	4.4 - 5.5
Ø 400	0.115	0.080	Ps (Pascals)	6	8	13	18	21	27	29
			NC	17	23	30	34	37	41	43
			q (I/s)	240	300	360	420	480	540	600
		0400400	Lt (meters)	2.5 - 3.5	2.9 - 3.9	3.3 - 4.4	3.8 - 5.0	4.2 - 5.5	4.7 - 6.0	5.1 - 6.
Ø 450	0.145	0.100	Ps (Pascals)	5	7	12	17	20	28	30
			NC	18	24	30	36	38	42	44
- 8			q (I/s)	280	340	400	460	520	580	640
		2.22	Lt (meters)	2.8 - 3.8	3.2 - 4.2	3.7 - 4.8	4.1 - 5.3	4.5 - 5.8	4.9 - 6.2	5.4 - 6.5
Ø 500	0.178	0.125	Ps (Pascals)	5	6	12	18	19	28	32
			NC	18	25	32	36	39	42	45

Throw (Lt) and terminal velocity (Vt)

Throw values 'Lt' given in the table is the radial distance in meters from the diffuser centre. The shorter 'Lt' distance shown is that point at which the airstream has been reduced to a terminal velocity (Vt) of 0.5M/s and the longer throw 'Lt' is that distance at which 'Vt' is 0.25M/s.

Ak Factors

Outlet areas in M² are given in table in the form of Ak values.

q(I/s) = Vk x Ak x 1000

Series GD Fixed Blade Swirl Diffusers



For supply or extract air, unique fixed curved blade swirl diffuser offering excellent performance at low to medium air volumes. The rapid reduction in both air velocity and temperature differential lead to very comfortable conditions within the occupied zone. Suitable for ceiling or duct mounting.

Construction

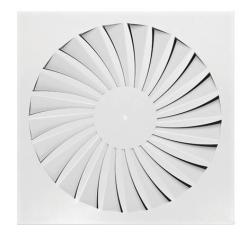
From 0.8mm thick pressed sheet steel with 0.8 thick rear collar.

Size

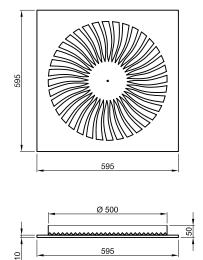
Available in 595 x 595mm for lay-in ceiling tile replacer or 500 \varnothing neck size.

How to Specify

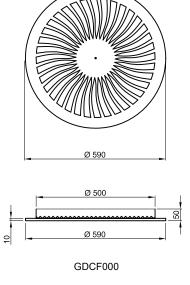
State Quantity, the series, product coding and the size width x height e.g 10 Qty. GDSF5SPF+4Y 595 x 595



Series	Fra	me Style		Options	Options		Accessories			Fixings		Finish	
GD	SF	Square Face Swirl	0	None	0	None	0	None		1	Neck Fixing	Υ	PPC BS /RAL Colour
	CF	Circular Face Swirl	5	Plenum / Duct Fixing Bar	т	Top Inlet Plenum	PF	Perforated Flat Plate Damper	+	2	External Drop Rod Lugs		
					s	Side Inlet Plenum				3	Clip-in T-Bar		
										4	Lay-in Tile Replacer		

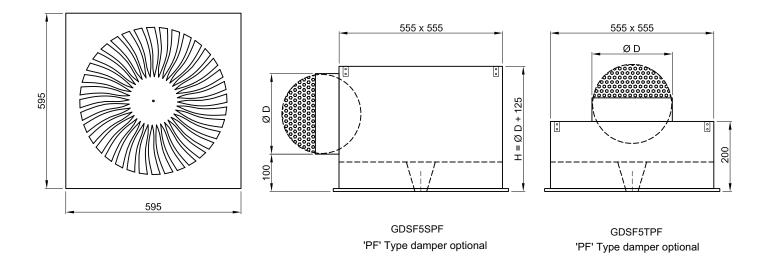


GDSF000

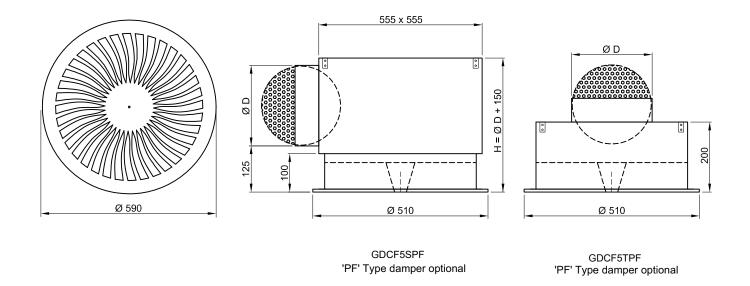


Series GD Fixed Blade Swirl Diffusers

SF - Square Face Swirl



CF - Circular Face Swirl



Series GFS Floor Swirl Diffuser



Design for supply air applications, the floor swirl diffuser is suitable for installing into floors with a pressurized void, or can be ducted using an additional plenum box.

The diffuser includes an integral baffle, which can be adjusted to provide horizontal or vertical discharge patterns, along with a combined damper and dust basket.

Construction

The face plate and mounting ring are manufactured from cast aluminium, while the dust basket and baffle are formed from sheet mild steel.

The diffuser is supplied complete with fixing cleats to suit a floor Thickness up to 45mm.



Size

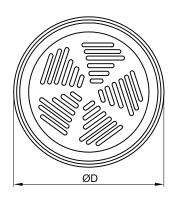
Available in size 200mm diameter only.

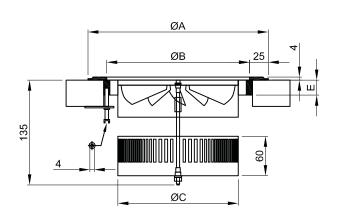
How to Specify

State Quantity, the series, product coding and the size width x height e.g 10 Qty. GFSDF200+C

Series	Frame Style	Size		Options			Finish
GFS	DF	200	Т	Top Inlet Plenum	+	Y	PPC /RAL Colour
			s	Side Inlet Plenum		С	Cast Aluminium

Size	ØA	ØВ	øс	E
200	236	190	160	19

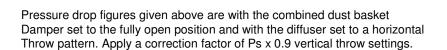




Series GFS Floor Swirl Diffuser

Diffuser	

SELECTION DATA								
q (l/s)	14	16	20	25	30	40		
Lt Horizontal (M)	0.5	0.6	0.7	0.9	1.1	1.4		
Lt Vertical (M)	0.62	0.72	0.9	1.1	1.3	1.8		
Ps (Pa)	13	16	26	40	60	105		
NC Horizontal Throw	<15	15	22	26	32	45		
NC Vertical Throw	<15	<15	15	20	25	33		



Damper adjustment will influence the pressure drop and noise figures. Apply the following correction factors:

Damper position 50% Open Ps X 1.4 + 2 NC 25% Open Ps X 2.0 + 8 NC

Throw values given are at 0.5 M/s Vt and are valid for horizontal throws With a Td-10 $^{\circ}$ C to 20 $^{\circ}$ C. Vertical throws will reduce when used for cooling, In this case apply the following factors.



Td 0°	-4°	-6°	-8°	-10°
Lt X 1	Lt x 0.7	Lt x 0.6	Lt x 0.5	Lt x 0.45