



Vane Swirl Diffusers

SDVS / SDVC

Introduction

The Waterloo Vane Swirl Diffusers are designed for areas where rapid mixing of supply air is required in rooms of ceiling height between 2.6m and 4m.

Product Description

- SDVSA** Square plate vane swirl diffuser with radial pattern (angled slot)
- SDVCA** Circular plate vane swirl diffuser with radial pattern (angled slot)
- SDVSB** Square plate vane swirl diffuser with radial pattern (normal slot)
- SDVCB** Circular plate vane swirl diffuser with radial pattern (normal slot)
- S** Side entry plenum
- V** Top entry plenum
- ADJ** Room adjustable vanes
- E** Lay-in, T8 / T16 tegular

Note: For available blanking options please contact the head office.

Features

- High air volume capacity
- Standard top entry neck, or side entry with plenum box
- Adjustable polymer deflectors enabling different discharge directions
- Optional room adjustable vanes
- Flat or ribbed blade appearance
- Attractive lightweight design
- Side or top entry plenums available
- In order to keep the same appearance the same design is used for supply and extract diffusers. There is no requirement to identify this on the order
- Lay in tegular options

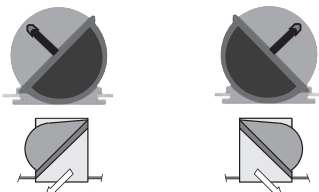
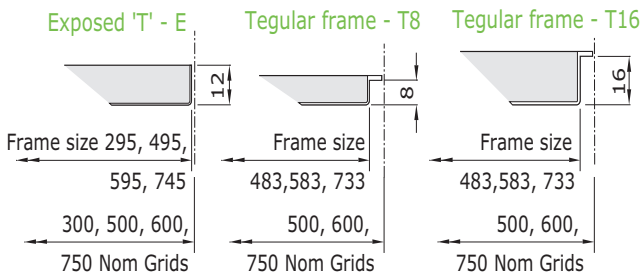
Finishes

- Black or white deflectors (to be specified on order)
- 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

Advantages

- Suitable for high ceilings (relative to other diffusers)
- Rapid induction of supply air

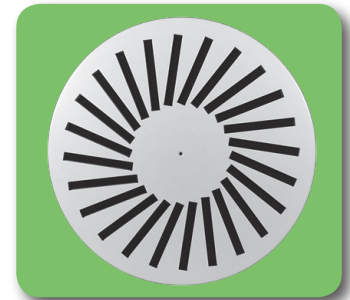
Frame Styles and Grid Sizes



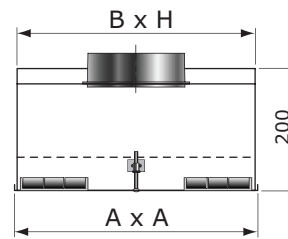
Air discharge left Air discharge right



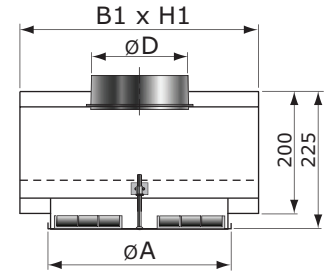
SDVS



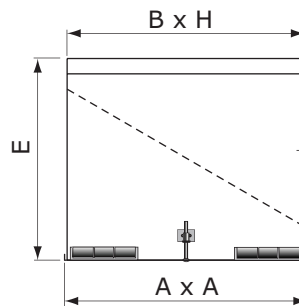
SDVC



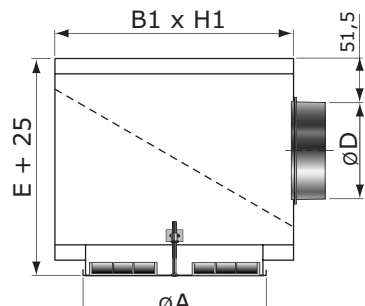
SDVSA-V / SDVSB-V



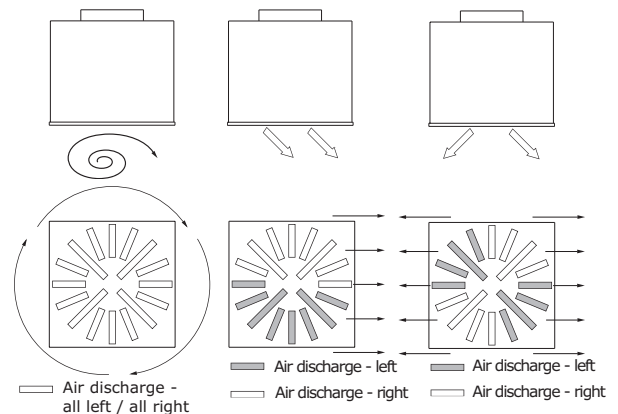
SDVCA-V / SDVCB-V



SDVSA-S / SDVSB-S



SDVCA-S / SDVCB-S



SDVS SDVC	Number of vanes	A x A	Ø A	B x H	B1 x H1	Nom. Ø D	E
300	8	295x295	300	290x290	390x390	160	290
400	16	395x395	400	390x390	490x490	200	330
500	16 / 24	495x495	500	490x490	590x590	200	330
600	16	595x595	600	590x590	690x690	200	330
600	24/40/48	595x595	600	590x590	690x690	250	380
625	16	620x620	625	615x615	690x690	200	330
625	24/40/48	620x620	625	615x615	690x690	250	380
800	64/72	795x795	800	790x790	890x890	315	450
825	64/72	820x820	825	815x815	890x890	315	450

ORDER EXAMPLE

SDVSA/600/E/48/WH/ADJ/PPM9010/S

Type _____

Front-plate size _____

Lay-in _____

Front face pattern _____

Vanes colour _____

Room adjustable vanes _____

Finish _____

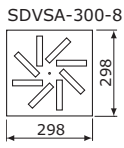
Plenum type _____



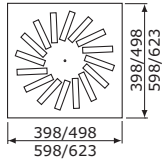
Vane Swirl Diffusers

SDVS / SDVC

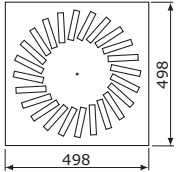
SDVSA



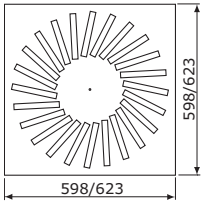
SDVSA-400-16
SDVSA-500-16
SDVSA-600-16
SDVSA-625-16



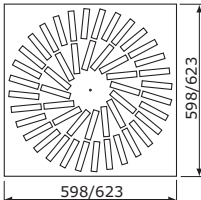
SDVSA-500-24



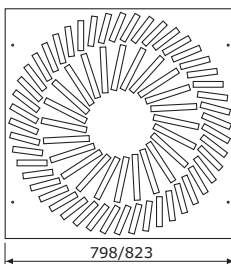
SDVSA-600-24
SDVSA-625-24



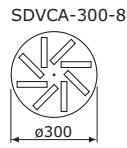
SDVSA-600-48
SDVSA-625-48



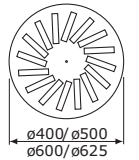
SDVSA-800-72
SDVSA-825-72



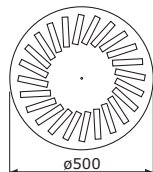
SDVCA



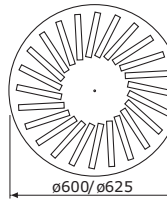
SDVCA-400-16
SDVCA-500-16
SDVCA-600-16
SDVCA-625-16



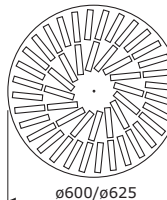
SDVCA-500-24



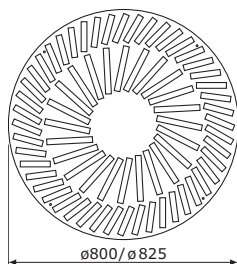
SDVCA-600-24
SDVCA-625-24



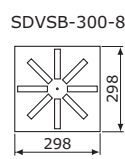
SDVCA-600-48
SDVCA-625-48



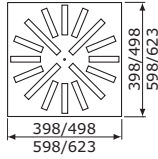
SDVCA-800-72
SDVCA-825-72



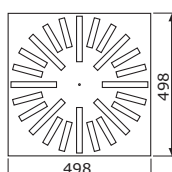
SDVSB



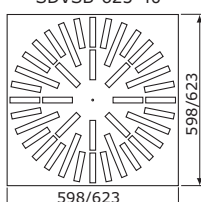
SDVSB-400-16
SDVSB-500-16
SDVSB-600-16
SDVSB-625-16



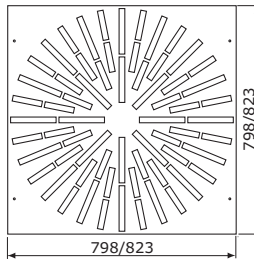
SDVSB-500-24



SDVSB-600-40
SDVSB-625-40



SDVSB-800-64
SDVSB-825-64



Fixing

Sizes 300 - 600
(inclusive) 1 central
screw

Sizes 625 - 825
(inclusive) 4 screws

Performance Table

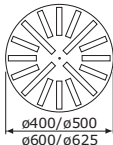
SDVSB / SDVCB		Supply				
m ³ /h	l/s	300 - 8	400-16 500-16 600-16 625-16	500 - 24	600-40 625-40	800-64 825-64
90	25	T	0.9			
		P _s	6			
		L _w	-			
108	30	T	1.0			
		P _s	8			
		L _w	-			
144	40	T	1.2			
		P _s	12			
		L _w	30			
180	50	T	1.4	1.2		
		P _s	21	17		
		L _w	36	32		
216	60	T	1.6	1.4	1.0	
		P _s	30	24	7	
		L _w	41	36	-	
252	70	T	1.8	1.6	1.1	
		P _s	41	30	9	
		L _w	46	41	27	
288	80	T	2.2	1.9	1.3	
		P _s	54	40	11	
		L _w	50	45	31	
360	100	T	2.3	1.5	1.0	
		P _s	62	17	6	
		L _w	50	37	27	
450	125	T		1.8	1.5	0.9
		P _s		26	11	1
		L _w		44	32	-
540	150	T		2.1	1.6	1.1
		P _s		38	19	7
		L _w		48	37	26
720	200	T		2.1	1.5	
		P _s		34	14	
		L _w		45	34	
900	250	T		2.5	1.8	
		P _s		56	22	
		L _w		51	40	
1080	300	T			2.2	
		P _s			31	
		L _w			44	
1260	350	T			2.5	
		P _s			43	
		L _w			49	

SDVCB

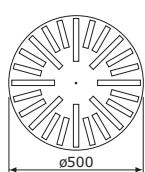
SDVCB-300-8



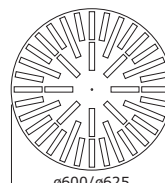
SDVCB-400-16
SDVCB-500-16
SDVCB-600-16
SDVCB-625-16



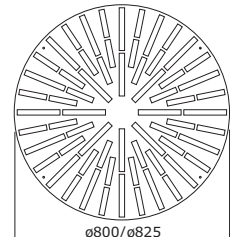
SDVCB-500-24



SDVCB-600-40
SDVCB-625-40



SDVCB-800-64
SDVCB-825-64





Vane Swirl Diffusers

SDVS / SDVC

Selection Criteria

Throw data is expressed in metres and is based on a terminal velocity of 0.5m/s and a 10°C cooling differential. For isothermal or 10°C heating conditions apply a factor of 1.15 or 1.32 respectively to the throws.

Noise levels are based on sound pressure levels with an assumed 8dB room absorption factor allowed.

Pressure loss data is shown in terms of static pressure loss (Pa) based on a diffuser fitted with a side entry plenum

Selection Example SDVSA-600-24

Supply airflow 80 l/s
Horizontal diffusion 1.5 m from centre
Static Pressure loss 4 Pa
Regenerated Noise 7 dBA

Performance Table

SDVSA SDVCA		Supply							Exhaust with side entry plenum					Exhaust with top entry plenum							
m ³ /h	l/s		300-8	400-16 500-16 600-16 625-16	500-24	600-24 625-24	600-48 625-48	800-72 825-72	300-8	400-16 500-16 600-16 625-16	500-24	600-24 625-24	600-48 625-48	800-72 825-72	300-8	400-16 500-16 600-16 625-16	500-24	600-24 625-24	600-48 625-48	800-72 825-72	
90	25	T	1.1																		
		P _s	9																		
		L _w	15																		
108	30	T	1.3	1.1											4						
		P _s	12	3																	
		L _w	20	-																	
144	40	T	1.6	1.3	1.1										7						
		P _s	22	6	3																
		L _w	27	-	-																
180	50	T	1.9	1.4	1.3																
		P _s	34	9	4				16							12					
		L _w	33	18	-				14							12					
216	60	T	2.1	1.6	1.4	1.3															
		P _s	50	14	6	2			24							17					
		L _w	38	22	17	-			20							18					
252	70	T	2.4	1.7	1.6	1.4															
		P _s	68	18	8	3			32							23					
		L _w	42	26	21	-			24							23					
288	80	T	2.6	1.8	1.7	1.5															
		P _s	88	24	11	4			42	14						30	11				
		L _w	45	30	24	12			28	14						27	14				
360	100	T		2.0	2.0	1.7	1.8														
		P _s		38	17	7	5		66	21	13					47	17	12			
		L _w		36	30	18	-		35	21	14					33	21	13			
450	125	T		2.3	2.3	1.9	1.9														
		P _s		59	26	11	7		103	33	20					73	26	19	8		
		L _w		42	36	24	18		42	28	20					40	27	19	11		
540	150	T			2.6	2.1	2.0	1.9													
		P _s			38	15	10	3		48	29	13				38	27	12	10		
		L _w			40	28	23	-		31	26	15				33	25	17	11		
720	200	T				2.5	2.2	2.1													
		P _s				27	18	6		85	52	23	18	7		67	48	21	18		
		L _w				36	31	20		42	35	24	20	13		42	34	25	20		
900	250	T				2.8	2.4	2.3													
		P _s				42	28	9			82	36	29	11			75	34	28	11	
		L _w				42	36	26			42	31	26	20			41	32	27	15	
1080	300	T					2.5	2.5													
		P _s					41	13			118	51	41	16			108	48	40	16	
		L _w					41	30			47	36	32	26			46	38	32	21	
1260	350	T						2.6													
		P _s						17			70	56	22				66	55	22		
		L _w						34			41	37	30				42	37	26		
1440	400	T						2.8													
		P _s						23			91	73	28				86	72	29		
		L _w						38			45	41	34				46	41	30		
1620	450	T						2.9													
		P _s						29				93	36						91	37	
		L _w						41				44	38						45	33	
1800	500	T						3.0													
		P _s						35						45						45	
		L _w						44						41						37	
2160	600	T																			
		P _s																			65
		L _w																			42