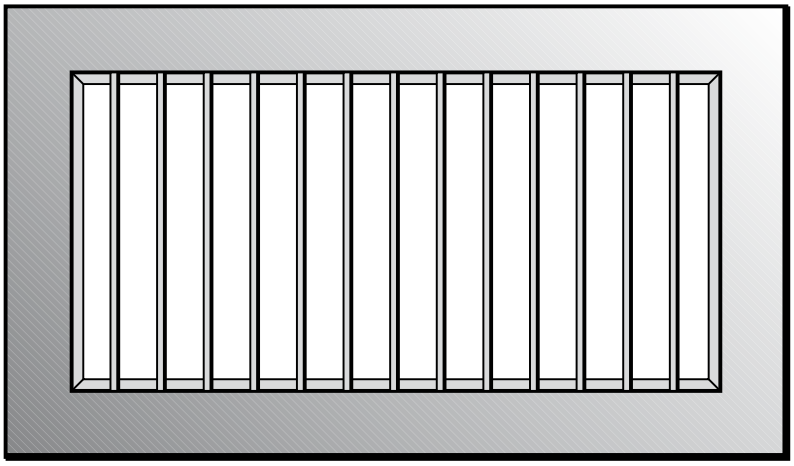
580 Series Single Deflection Grille

airdistribution



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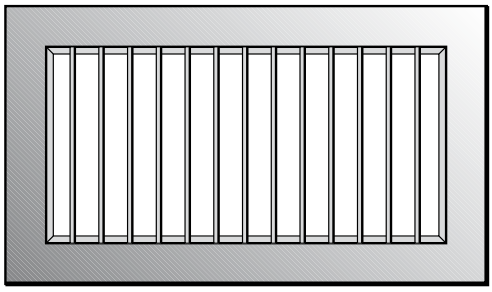
Supply Air

SINGLE DEFLECTION GRILLE

Series 580, 585



General

Single deflection supply air grilles include adjustable deflection vanes providing air pattern control in either the horizontal or vertical plane. These grilles are primarily used in high sidewall applications where their high capacity and long throw capability enables them to provide air distribution across large open rooms, such as supermarkets, warehouses, factories, etc. Grilles are available with 10 mm or 20 mm vane spacings and have a flat surface mounting frame.

Design

Air pattern control in a single plane is provided by a single set of vanes, each vane indvidually adjustable at the face of the grille, without tools. Grilles can be specified with the vanes horizontal or vertical.

Performance Data

Performance data is applicable to either double or single deflection vane core designs without OBD. Throws are given for a terminal velocity of 0.25 m/s at 0°, 22.5° and 45° vane settings. Note: For any given outlet size and volume, the values of throw, total pressure and sound levels will differ at each vane setting.

Sizes (mm)

Available square or rectangular

Minimum Nominal (hole) size :	100 mm x 100 mm
Maximum Nominal (hole) size :	1800 mm x 1200 mm
Standard size increment :	25 mm width or height
When ordering, specify nominal width followed by nominal height:	e.g. 500 mm wide x 200 mm high

Finishes

Standard finish is gloss powder coat. Alternative colours and finishes are available.

Construction

Frame and vanes are of corrosion resistant aluminium construction.

Accessories

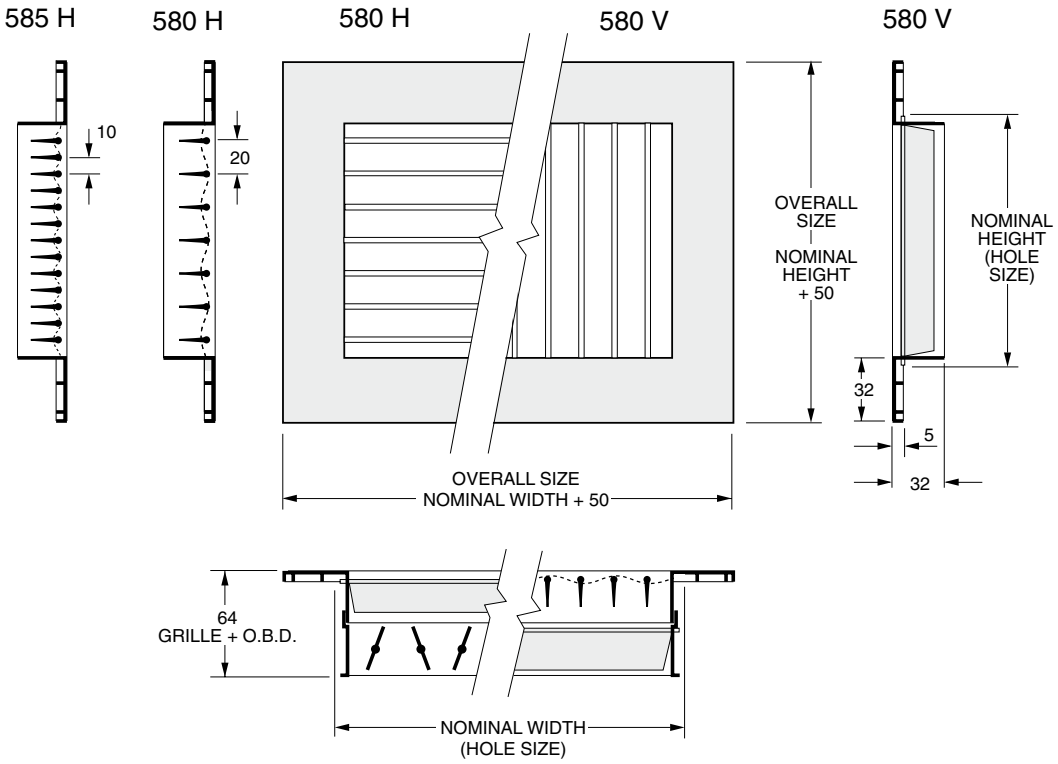
Optional accessories include opposed blade dampers (OBD), square-to-round (SRA) ducting adaptors.

Dimensions (mm)

SINGLE DEFLECTION GRILLE

Model	Vane Position	Vane Spacing
580 H	horizontal	20 mm
580 V	vertical	20 mm
585 H	horizontal	10 mm
585 V	vertical	10 mm

Series 580, 585 H or V



Performance Data

SINGLE & DOUBLE DEFLECTION GRILLE
5880, 580, 56880

Nominal Size (mm) (W x H)	Neck Velocity m/s	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0	8.0	9.0
	Vel. Press. Pa	0.5	2.0	3.0	5.0	7.0	9.0	14.0	20.0	32.0	41.0

200 x 100	Volume l/s	24			30			40			48			56			64			80			95			128			145		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	6	8	8	10	9	10	13	15	17	22	24	26	34	34	38	50	46	51	68	60	68	88	112	128	168	125	138	188
	Throw m	3.3	3.1	2.0	3.7	3.4	2.4	4.3	4.0	2.8	5.8	4.9	3.7	6.6	5.9	4.1	7.8	6.9	4.7	9.2	8.5	5.5	10.7	9.8	6.4	14.3	12.2	8.5	15.3	12.8	8.8
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 50
150 x 150 200 x 125 250 x 100	Volume l/s	29			38			48			57			66			76			95			114			150			170		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	7	5	6	7	9	10	13	14	15	20	20	29	45	23	25	33	35	38	51	55	60	80	92	98	138	112	122	163
	Throw m	3.4	3.1	2.1	3.9	3.5	2.5	4.6	4.3	2.8	5.9	5.0	3.2	7.3	6.1	4.6	7.9	7.0	4.9	9.5	8.2	5.8	11.6	9.8	7.0	14.3	12.5	9.2	15.0	13.1	9.8
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 50	< 50
200 x 150 250 x 125 300 x 100	Volume l/s	40			50			65			80			90			104			125			150			195			230		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	3	4	5	6	7	9	13	14	19	18	19	26	21	23	34	30	32	42	35	38	53	60	65	90	100	105	150	137	150	222
	Throw m	3.7	3.2	2.4	4.6	4.0	2.7	5.8	5.2	3.7	7.3	6.4	4.6	8.2	7.0	4.9	9.9	8.4	6.0	10.4	8.8	6.4	12.8	11.3	8.2	15.2	13.4	10.4	16.2	14.0	11.5
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 50	< 50
200 x 200 250 x 150 300 x 125 400 x 100	Volume l/s	50			70			90			105			120			140			175			210			280			315		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	9	11	13	13	15	19	18	19	24	21	23	30	30	33	43	48	53	68	69	75	95	114	125	163	144	159	207
	Throw m	3.9	3.4	2.4	5.8	5.2	3.4	7.3	6.4	4.4	8.7	7.5	5.3	9.2	7.9	5.8	10.3	8.8	6.7	13.4	11.9	8.5	15.3	13.1	10.7	16.2	14.3	11.0	18.3	15.1	12.2
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 40	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 50
300 x 150 350 x 125 450 x 100	Volume l/s	60			80			100			120			140			160			200			240			320			360		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	7	8	11	12	13	17	15	16	21	21	23	30	28	31	41	43	46	63	60	65	85	110	118	157	139	149	198
	Throw m	4.3	3.7	2.8	6.1	5.2	3.7	7.3	6.4	4.6	8.2	7.3	5.2	9.5	8.5	6.1	10.9	9.3	7.0	13.4	11.6	8.8	15.0	13.4	10.1	17.0	15.2	11.8	20.1	16.8	13.4
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 50	< 50
250 x 200 350 x 150 400 x 125 500 x 100	Volume l/s	70			90			110			130			155			175			220			265			350			395		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	6	7	8	11	12	13	16	14	15	20	20	21	28	26	28	37	41	45	60	56	60	80	92	100	132	130	136	182
	Throw m	4.6	4.0	3.0	5.5	4.9	3.4	7.9	6.7	4.8	8.2	7.3	5.5	9.5	8.5	6.4	11.6	10.7	7.0	13.4	11.9	9.5	15.3	13.1	10.0	19.8	17.0	12.8	20.8	19.8	14.3
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 60	< 60

Note: Throw value given is for a terminal velocity of 0.25 m/s.

Performance Data

SINGLE & DOUBLE DEFLECTION GRILLE
5880, 580, 56880

Nominal Size (mm) (W x H)	Neck Velocity m/s	1.5			2.0			2.5			3.0			3.5			4.0			5.0			6.0			8.0			9.0		
	Vel. Press. Pa	0.5			2.0			3.0			5.0			7.0			9.0			14.0			20.0			32.0			41.0		
250 x 250 300 x 200 400 x 150 500 x 125 650 x 100	Volume l/s	85			110			145			170			195			225			280			340			450			500		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	5	7	8	11	10	12	15	15	16	21	21	23	28	26	28	38	42	46	61	58	61	83	80	85	112	128	138	188
	Throw m	4.7	4.1	3.1	6.6	5.6	4.1	7.9	7.0	5.2	9.6	8.4	6.0	11.1	9.9	7.5	12.2	11.0	8.5	14.0	13.1	10.1	16.6	15.0	11.3	20.7	18.6	13.4	21.7	20.1	14.3
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 50	< 60	< 60
300 x 250 500 x 150 600 x 125 750 x 100	Volume l/s	100			135			170			200			240			270			340			410			540			610		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	6	6	7	9	9	10	13	14	15	20	19	21	27	25	28	38	38	40	52	60	64	80	100	112	152	128	143	194
	Throw m	5.2	4.3	3.4	6.9	5.6	4.4	8.4	7.5	5.6	9.5	8.5	6.7	11.4	10.0	7.8	12.8	11.0	8.2	15.3	13.3	10.2	18.3	15.9	12.8	21.4	18.3	15.3	22.2	19.2	15.7
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 50	< 60	< 60	< 60	< 60
300 x 300 350 x 250 450 x 200 600 x 150	Volume l/s	125			165			205			245			290			330			410			490			655			740		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	3	4	5	6	7	9	10	11	13	14	16	20	18	20	26	25	27	36	38	43	58	49	54	73	98	106	142	126	136	181
	Throw m	5.5	4.9	3.7	7.3	6.4	4.9	9.0	7.8	5.9	10.1	8.9	7.0	11.9	10.4	8.1	13.4	11.9	9.2	16.2	14.6	10.5	18.6	16.2	12.2	22.9	18.6	16.0	24.1	19.7	16.5
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 60	< 60	< 60	< 60
350 x 300 400 x 250 500 x 200 700 x 150	Volume l/s	145			195			240			290			340			390			485			580			775			875		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	6	7	9	10	10	13	14	15	19	19	20	26	25	26	34	38	41	53	53	58	75	99	103	134	126	131	171
	Throw m	5.5	4.9	3.7	7.6	7.0	5.5	9.0	8.5	6.4	10.2	9.3	7.5	11.7	10.8	8.4	14.1	12.3	10.5	16.2	14.5	11.5	18.9	16.8	12.4	24.0	20.4	16.3	25.9	22.0	16.8
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 40	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60
350 x 350 400 x 300 500 x 250 600 x 200 850 x 150	Volume l/s	170			230			285			340			400			455			570			685			900			1 025		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	6	8	9	10	11	13	13	15	19	20	23	30	26	29	37	36	40	53	52	58	77	90	100	132	116	129	171
	Throw m	6.1	5.8	4.6	8.1	7.2	6.6	9.5	8.5	7.3	11.1	9.9	8.4	13.1	11.3	10.1	14.8	12.8	10.9	17.0	15.0	12.5	20.1	18.3	14.1	25.2	21.4	16.8	27.2	23.1	17.7
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 50	< 60	< 60	< 60	< 60
400 x 400 450 x 350 550 x 300 650 x 250 800 x 200	Volume l/s	225			300			375			450			530			600			750			900			1 200			1 350		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	6	7	10	10	11	14	15	17	22	18	20	27	26	28	38	41	44	60	59	63	86	104	112	152	132	142	192
	Throw m	7.3	5.9	4.8	9.8	8.5	6.7	11.6	10.4	8.5	13.7	12.5	9.8	14.3	13.4	10.0	16.2	15.0	11.6	18.6	17.4	13.4	22.3	18.9	14.5	27.2	23.1	17.7	29.8	25.3	19.4
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 60	< 60	< 60	< 60

Note: Throw value given is for a terminal velocity of 0.25 m/s.

Performance Data

SINGLE & DOUBLE DEFLECTION GRILLE
5880, 580, 56880

Nominal Size (mm) (W x H)	Neck Velocity m/s	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0	8.0	9.0
	Vel. Press. Pa	0.5	2.0	3.0	5.0	7.0	9.0	14.0	20.0	32.0	41.0

500 x 350 600 x 300 700 x 250 900 x 200 1200 x 150	Volume l/s	245			330			410			490			575			655			820			985			1 310			1 475		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	5	6	9	9	10	12	16	15	17	23	18	20	27	25	28	38	37	40	56	54	58	81	95	102	143	120	130	181
	Throw m	7.6	6.0	4.8	10.0	8.9	6.9	11.7	10.8	8.0	13.4	12.5	9.2	14.6	13.4	10.1	16.8	15.0	11.8	20.0	17.4	12.5	23.1	19.6	14.8	28.5	24.2	18.5	32.0	27.2	22.4
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 40	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60
450 x 450 500 x 400 800 x 250 1000 x 200	Volume l/s	285			380			480			575			670			765			955			1 145			1 530			1 720		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	6	6	7	9	10	11	15	13	15	19	18	20	26	24	25	34	38	39	53	54	56	76	96	100	136	121	126	172
	Throw m	7.6	6.1	4.9	10.0	8.9	6.9	11.9	10.4	6.4	14.0	11.9	8.5	16.2	13.7	9.5	18.0	15.6	12.6	20.3	17.6	14.2	23.8	20.2	16.7	30.6	26.0	21.4	32.5	27.6	22.8
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60
500 x 500 550 x 450 700 x 350 850 x 300 1000 x 250	Volume l/s	360			475			600			720			840			960			1 200			1 440			1 920			2 160		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	6	7	9	10	11	14	15	17	22	19	21	28	23	25	33	38	49	57	56	62	82	99	110	146	116	127	167
	Throw m	7.8	7.0	5.2	11.0	9.2	7.0	14.0	11.6	8.5	16.5	13.7	9.8	18.0	14.9	11.3	19.2	16.3	13.4	23.8	20.2	16.7	28.0	23.8	19.6	31.4	26.7	22.0	38.0	32.3	26.6
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 40	< 40	< 40	< 40	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60	< 60	< 60
700 x 450 800 x 400 900 x 350 1000 x 300 1250 x 250	Volume l/s	450			600			750			900			1 050			1 200			1 500			1 800			2 400			2 700		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	5	6	7	7	9	9.5	11	13	13	15	19	20	23	25	25	27	30	41	47	51	59	68	74	105	120	131	127	137	152
	Throw m	7.9	7.0	6.1	11.6	9.8	7.9	14.6	12.5	9.5	18.0	15.0	11.0	18.8	15.6	12.5	19.8	16.8	13.9	24.8	21.1	17.4	30.6	26.0	21.4	32.0	27.2	22.4	39.7	33.7	27.8
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 35	< 35	< 35	< 35	< 40	< 40	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60
600 x 600 900 x 400 1200 x 300 1450 x 250 1800 x 200	Volume l/s	500			670			850			1 020			1 120			1 360			1 700			2 040			2 720			3 060		
	Deflection °	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45	0	22.5	45
	Total Press. Pa	4	4	5	6	7	8	9	11	13	13	15	18	16	18	23	23	26	33	37	42	53	53	60	76	94	106	136	116	132	167
	Throw m	8.2	7.3	6.4	10.7	9.5	7.9	14.9	12.2	9.5	19.3	13.7	10.7	19.4	16.2	12.9	19.8	17.4	14.0	25.3	21.5	17.7	32.8	27.9	23.0	33.6	28.6	23.4	40.2	34.2	28.2
	N.C.	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 35	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 50	< 50	< 50	< 60	< 60	< 60	< 60	< 60

Note: Throw value given is for a terminal velocity of 0.25 m/s.

PERFORMANCE DATA

The data in the Performance Tables was obtained from tests conducted in accordance with ISO Standard 5219, ISO Standard 3741 and ADC Test Code 1062 GRD84.

Additional performance details are included, where applicable, within each product section.

For performance data beyond the tables' range, consult your nearest temperzone sales office.

Definitions:

Core Area (m^2)
The total plane area within the frame opening through which air passes.

Isothermal Air
Air with a nil temperature difference between primary (supply) air and secondary (room) air.

Neck Velocity (m/s)
Neck Velocity = Volume (flow rate) ÷ Neck Core Area.
Measured in metres per second at the neck - the point where the grille/diffuser attaches to the duct.

Noise Criteria (NC)
The Noise Criteria (NC) system curves define the limits which the octave band spectrum of a continuous noise source must not exceed to achieve compliance with the design goal and a level of occupant acceptance.

Standard (Dry) Air
Density of 1.2 kg/m^3 at 21°C and 760 mm Hg (barometric pressure).

Static Pressure (Pa)
The Static pressure (of an air steam) is the force per unit area exerted in all directions, irrespective of the air flow direction. Can be positive or negative. Measured in pascals, perpendicular to the air flow direction.

Terminal Velocity (m/s)
The specific velocity in metres per second used to define the throw distance.

Throw (m)
The horizontal or vertical distance, in metres, that the air stream travels from the outlet face to where the specific terminal velocity occurs. Each Performance Data Chart states throw values in metres at the terminal velocities noted. Throw distances are based on isothermal air, for grilles/diffusers flush mounted in a wall, sill or ceiling. For grilles/diffusers, mounted on exposed ductwork, throws will be approximately 70% of performance data values.

Total Pressure (Pa)
The Total Pressure (of an air stream) equals the sum of its Static Pressure and its Velocity Pressure. Measured in pascals, parallel and counter to the air flow direction. Tabled values do not include allowance for Opposed Blade Dampers (OBDs), except Series 5180.

Velocity (Dynamic) Pressure (Pa)
The Velocity pressure (of an air stream) is the force per unit area equivalent to the transformation of the kinetic energy into pressure energy. Always positive. Obtained from the difference between Total and Static pressure.

Volume (l/s)
Volume of air per unit of time (flow rate) entering or leaving the grille or diffuser.
Measured in litres per second.

Noise Criteria (Sound)

The information presented below is included to assist in the design and/or selection of air distribution equipment for the intended end-use environment. 'NC' curves are shown, together with the suggested design goal NC range table.

The NC levels in the performance data tables are for the grille/diffuser alone, and assume a room attenuation of 10 dB across the octave band spectrum with a single outlet operating. Upstream duct-generated noise is not considered in the data. By selecting grille/diffuser sizes in accordance with the performance data tables and at the appropriate NC level, there will be no significant contribution to the overall system sound levels by the grille/diffuser. All data presented is in accordance with international standards, i.e. SWL re: 10^{-12} watts.

Sound level measurements, taken in a calibrated reverberant room, can be read directly as Sound Power Levels (SWL) in decibels (dB) whereas measurements taken in the installed environment are Sound Pressure Levels (SPL) in decibels (dB) which can be plotted on the NC curves.

By utilising the NC curves and NC range table, compliance with the design goal can be confirmed by:

(i) predicting the Sound Pressure Levels (SPL) which can be calculated from published Sound Power Level (SWL) data and specified room characteristics,
(ii) measuring Sound Pressure Levels (SPL) directly in an existing installation - preferably using an octave band sound pressure level meter.

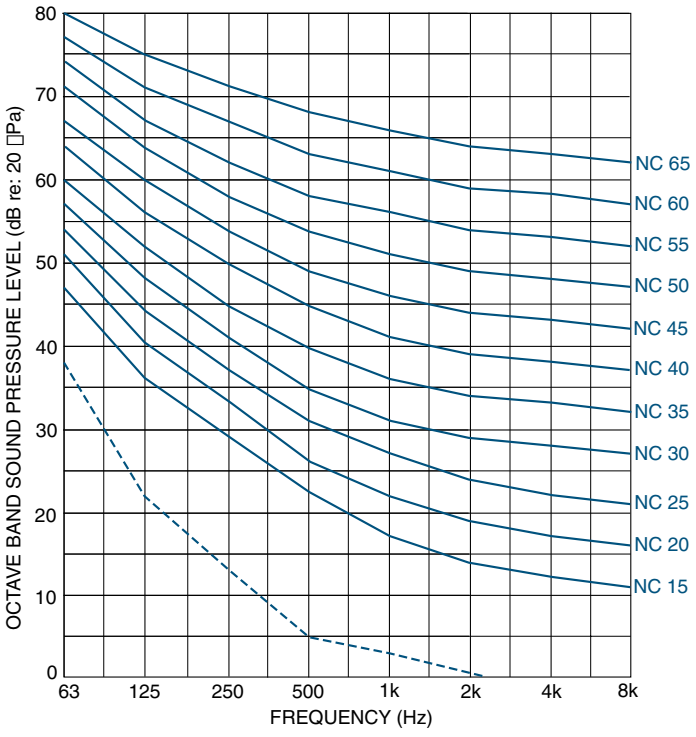
Where measurements cannot be carried out with an octave-band sound level meter, an approximation of an NC level can be calculated from an 'A' scale sound level meter reading, as follows:

NC Level = 'A' scale reading in dB −6 ± 2

Guide for Environmental Sound Level Design

Environment	*Suggested NC Range*
Broadcast, Recording Studios	15 - 20
Concert / Opera Halls	20 - 25
Residences, Bedrooms	25 - 35
Hospitals	25 - 35
Theatres, Halls, Churches	25 - 30
Cinemas	30 - 35
Private Offices, Libraries	30 - 35
Restaurants, Bars	35 - 45
Retail Stores & Shops	35 - 45
General Offices, Schools	35 - 45
Swimming Centres, Gymnasiums	35 - 50
Kitchens	40 - 50
Factories	
- Light Engineering	45 - 65
- Heavy Engineering	55 - 75

NC Curves



For more specific information on allowable noise levels, consult the latest issue of 'ASHRAE Guide and Data Book - Fundamentals and Equipment'.

SUGGESTED SPECIFICATIONS

Single-Deflection Grille - Series 580, 585
All side wall supply air grilles shall have individually adjustable deflection vanes for 'single' deflection air pattern control. Frames and vanes shall be of aluminium alloy sections, finished in commercial grade powder or stoving enamel coating all as manufactured by **temperzone** Limited. Where grilles (registers) are fitted with opposed blade volume regulating dampers (OBD), the adjustment lever shall be accessible from the register face.

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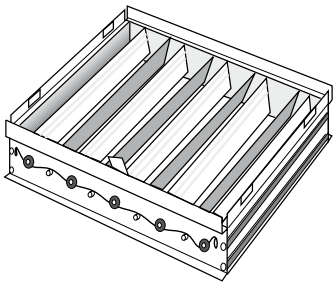
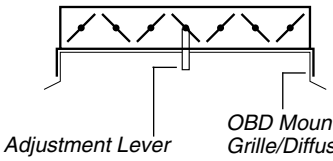
ACCESSORIES

Opposed Blade Damper (OBD)

- Controls air volume for balancing and fine adjustment
- Installs directly to neck with clip fasteners
- Lever operated from the face of the grille/diffuser
- Not intended for use as a shut-off damper
- Aluminium construction
- Sized to suit grilles/diffusers





Square to Round Adaptor (SRA)

- Adapts square neck grilles/diffusers to round flexible or rigid ducting
- Black Satin enamel finish on inside surfaces
- Galvanised steel construction;
  black polyethylene construction for
  size 300 sq. to 200/250 round
- Sized to suit grilles/diffusers and ducting