

Perforated Diffusers

Description

For supply or extract air, having either hinged or removable perforated face plate with rear mounted air deflection plates for 4, 3, 2 or 1 way air pattern. Suitable for ceiling mounting.

Construction

1.6mm thick extruded aluminium frame. Perforated face plate and air pattern controllers manufactured from sheet steel. Optional OBD is of extruded aluminium.

Size and Weight

From 150 x 150 neck size to 600 x 600 o/all in 50mm increments.

Weight approximately 16.5kg/m².

Free area 46%.

How to Specify

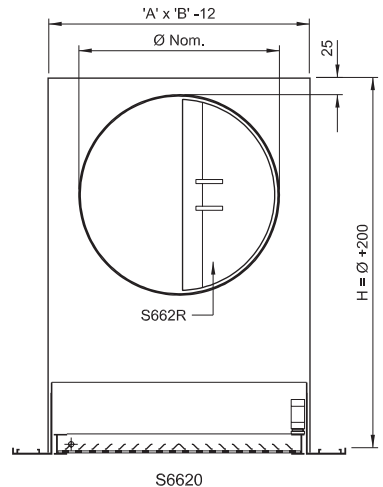
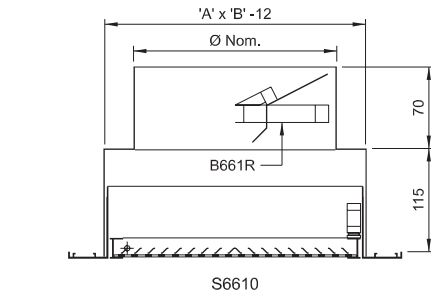
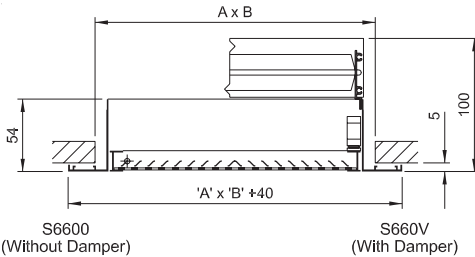
STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

e.g. 10 Qty. S660V+6C 595 x 595 o/all.



Frame Style	Core	Options	Accessories
S 30mm Flange	66 Perforated + Directional Baffles	0 None	0 None
N 21mm Flange	6E Perforated No Directional Baffles	1 Top Inlet Plenum	V Damper
B 32mm Bevel Edged Flange		2 Side Inlet Plenum	R Twin Blade Damper
0 Core Only			

Fixings	Finish
2 Neck Fixings	C PPC BS / RAL Colour
1 Flange Holes	D Mill Finish
5 Clip-in T-Bar	
6 Lay-in Tile Replacer	



Technical Data Perforated Diffusers

Perforated plate diffuser

'B66' model diffuser has 100% full-flow concealed rear air pattern controllers thus whether set for 4, 3, 2, or 1-way air deflection the pressure drop and noise rating remain constant. The perforated face plate series are ideal for high airchange rates and high cooling differentials.

Performance data

Based upon a ceiling height of 2.7 metres, a 12°C cooling temperature differential and flush unobstructed false ceiling. For each 0.3 metre increase above 2.7 metre ceiling height the throw will be decreased by approximately 5% up to a maximum of 3.9 metres.

Noise levels

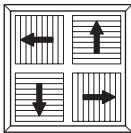
Noise ratings in the form of 'NC' levels are given in the performance tables and are based on an 8dB deduction for average room absorption and sound power level (LW) 10⁻¹² W.

Damper influence

Data includes a damper in the fully open position. Should a damper not be required multiply the static pressure value x 0.89 and deduct 4NC. Harsh throttling of the damper must be avoided.

Air pattern adjustment

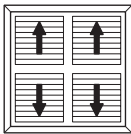
Both models 'B66' and 'B6E' diffusers have hinged face plates. To adjust the air pattern from 4-way to 3, 2, or 1-way simply unclip the deflectors and rotate to the desired position then re-clip. Adjustment does not affect the resistance or noise criteria.



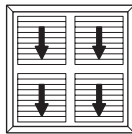
Four - Way



Three - Way

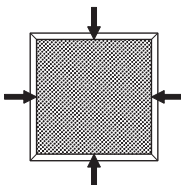


Two - Way



One - Way

Rear deflector baffle settings



Rear deflector baffles not fitted to 'B6E00' extract diffusers

Extract

Throw (Lt)

Throw values given in tables are based on the 'B661R' diffuser. Tabulated throws are with 'Ceiling Effect' and is the distance in metres from the outlet to the opposite wall or half the distance between opposing discharge sources. Without 'Ceiling Effect' i.e. diffusers mounted on exposed ducting the throw distance values given in the tables will be reduced by approximately 40% and a downward deflection of the airstream up to 30° from the horizontal will prevail.

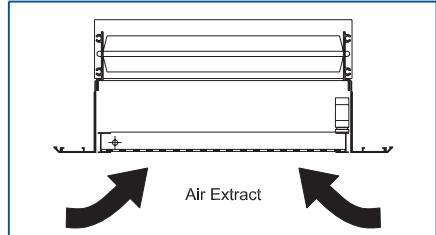
Terminal velocity 'Vt'

The shorter throw distance given in the tables (fig. 2.) is that point in distance at which the airstream velocity has been reduced to 0.5 M/s and the longer throw distance (Lt) is that point at which the airstream velocity (Vt) has been reduced to 0.25 M/s.

Circular connections

Bends close to the diffuser neck connection may adversely affect performance. Data is based upon a straight taut connection 0.75M long. In restricted ceiling void height applications it is recommended the side entry plenum boxes be used.

Fig. 1.



'A' x 'B' (mm)	q (l/s)	Vn (M/s)	Psn Pascals	NC
250 x 250	50	0,85	6	-
	75	1,30	8	16
	100	1,75	12	20
	125	2,20	19	25
	150	2,60	25	28
	200	3,50	40	35
350 x 350	250	4,35	63	38
	150	1,30	8	19
	200	1,75	17	22
	250	2,15	29	26
	300	2,60	38	32
	375	3,25	52	35
450 x 450	425	3,70	63	39
	500	4,30	94	44
	250	1,30	12	18
	300	1,55	16	23
	350	1,80	20	27
	400	2,10	26	29
550 x 550	450	2,35	33	32
	500	2,60	42	35
	550	2,85	53	41
	350	1,20	5	17
	425	1,45	15	26
	500	1,75	21	30
550 x 550	575	2,00	29	32
	625	2,15	32	35
	700	2,40	37	38
	800	2,75	45	42

Technical Data Perforated Diffusers

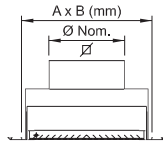
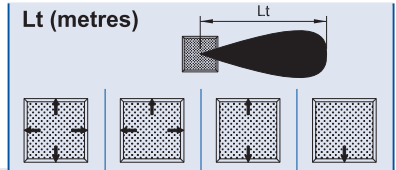


Fig. 2.



A x B	q (l/s)	Ø or ∇	Vn (M/s)	Ps (Pascals)	NC	(4 - Way)	(3 - Way)	(2 - Way)	(1 - Way)
255 x 255	30	150	1.70	3	-	- 0.8	0.5 - 1.0	0.8 - 1.2	1.1 - 1.6
	40	150	2.25	5	-	0.5 - 1.0	0.8 - 1.2	1.2 - 2.0	1.5 - 2.5
	50	150	2.90	6	-	0.7 - 1.2	1.1 - 1.7	1.5 - 2.5	1.7 - 2.8
	60	150	3.50	8	-	0.8 - 1.5	1.3 - 2.1	1.8 - 3.0	2.2 - 3.6
	70	150	3.95	12	23	1.1 - 1.8	1.7 - 2.6	2.5 - 3.5	2.6 - 4.3
	80	150	4.50	14	28	1.2 - 2.1	2.0 - 3.0	2.7 - 4.2	-
	90	150	5.00	17	32	1.5 - 2.5	2.7 - 3.8	3.0 - 4.7	-
355 x 355	100	150	5.65	20	34	1.8 - 3.0	3.2 - 4.6	-	-
	60	200	1.90	2	-	0.7 - 1.0	1.0 - 1.4	1.5 - 2.3	2.1 - 3.0
	80	200	2.50	5	15	0.9 - 1.5	1.4 - 1.8	2.1 - 3.2	2.6 - 3.6
	100	200	3.20	6	22	1.0 - 1.6	1.6 - 2.1	2.3 - 3.3	2.8 - 3.7
	120	200	3.80	7	23	1.3 - 1.8	1.7 - 2.5	2.6 - 3.8	2.8 - 3.9
	140	200	4.45	10	27	1.5 - 2.2	2.0 - 3.1	3.3 - 4.5	-
	160	200	5.10	14	31	1.8 - 2.7	2.4 - 3.8	3.6 - 4.8	-
455 x 455	180	200	5.70	19	38	2.2 - 3.3	2.7 - 4.0	-	-
	200	200	6.35	22	40	2.4 - 3.5	-	-	-
	80	250	1.60	3	17	0.6 - 1.0	0.8 - 1.2	1.2 - 2.0	1.6 - 2.4
	100	250	2.05	5	20	0.8 - 1.4	1.2 - 1.9	1.6 - 2.4	2.0 - 3.0
	120	250	2.45	7	21	1.0 - 1.6	1.5 - 2.2	2.0 - 3.0	2.2 - 3.2
	140	250	2.85	10	24	1.4 - 2.0	1.7 - 2.5	2.6 - 3.3	3.0 - 4.0
	160	250	3.25	12	27	1.7 - 2.4	2.2 - 3.3	3.0 - 4.0	-
555 x 555	180	250	3.70	14	30	2.0 - 3.0	2.7 - 3.7	3.4 - 4.5	-
	200	250	4.10	17	31	2.4 - 3.4	3.1 - 4.3	-	-
	220	250	4.50	20	36	2.7 - 3.7	3.3 - 4.6	-	-
	50	150	2.90	3	-	0.6 - 1.1	0.9 - 1.6	1.2 - 2.2	1.5 - 2.5
	60	150	3.50	3	-	0.8 - 1.4	1.1 - 1.8	1.6 - 2.8	2.1 - 3.2
	70	150	3.95	4	16	1.2 - 1.8	1.4 - 2.4	2.2 - 3.5	2.6 - 3.8
	80	150	4.50	5	19	1.2 - 2.2	1.5 - 2.6	2.4 - 3.8	2.7 - 4.0
555 x 555	90	150	5.00	7	26	1.4 - 2.5	1.8 - 3.0	3.0 - 4.6	3.0 - 4.4
	100	150	5.65	9	28	1.6 - 2.8	2.0 - 3.3	3.2 - 4.8	-
	110	150	6.20	13	33	2.0 - 3.2	2.4 - 3.7	-	-
	120	150	6.80	18	38	2.3 - 3.6	2.6 - 4.0	-	-
	80	200	2.50	3	18	0.8 - 1.3	1.1 - 1.8	1.5 - 2.5	1.9 - 3.1
	100	200	3.20	5	19	1.0 - 1.6	1.3 - 2.0	1.9 - 3.0	2.3 - 3.5
	120	200	3.80	6	21	1.2 - 1.8	1.6 - 2.4	2.5 - 3.7	2.8 - 4.0
555 x 555	140	200	4.45	7	24	1.5 - 2.4	2.0 - 3.2	3.0 - 4.5	3.3 - 4.8
	160	200	5.10	10	27	2.0 - 3.2	2.4 - 3.7	3.4 - 5.0	-
	180	200	5.70	13	34	2.3 - 3.6	2.6 - 4.0	3.8 - 5.7	-
	200	200	6.35	18	38	2.6 - 4.0	3.0 - 4.5	-	-
	220	200	7.00	23	40	3.0 - 4.5	3.5 - 5.0	-	-
	100	250	2.00	3	-	1.2 - 1.8	1.5 - 2.4	2.0 - 3.1	2.6 - 3.7
	150	250	3.05	6	22	1.5 - 2.2	1.9 - 2.7	2.5 - 3.8	3.3 - 4.6
555 x 555	180	250	3.70	7	24	1.8 - 2.4	2.2 - 3.2	3.0 - 4.5	4.0 - 5.3
	200	250	4.10	8	28	2.3 - 3.2	2.5 - 3.5	3.7 - 5.2	-
	230	250	4.70	11	30	2.7 - 3.8	3.0 - 4.7	4.5 - 6.3	-
	260	250	5.30	15	32	3.0 - 4.3	3.8 - 5.5	-	-
	280	250	5.70	19	34	3.4 - 4.8	4.5 - 6.2	-	-
	300	250	6.10	26	36	3.7 - 5.1	-	-	-
	555 x 555	120	300	1.70	3	17	0.7 - 1.2	1.1 - 1.7	1.4 - 2.3
150		300	2.10	5	19	1.0 - 1.7	1.4 - 2.2	1.9 - 2.9	2.5 - 4.0
200		300	2.80	8	22	1.4 - 2.2	1.8 - 2.7	2.5 - 3.9	3.1 - 4.5
230		300	3.20	10	21	1.5 - 2.5	2.2 - 3.2	3.0 - 4.3	-
270		300	3.80	12	27	2.0 - 3.2	2.8 - 4.4	4.0 - 6.0	-
320		300	4.50	15	34	2.5 - 3.8	3.5 - 5.0	-	-
360		300	5.10	21	36	3.0 - 4.5	4.4 - 6.2	-	-
400		300	5.60	26	38	3.5 - 5.3	-	-	-
450		300	6.35	30	41	4.0 - 6.0	-	-	-