



Linear Slot Diffuser

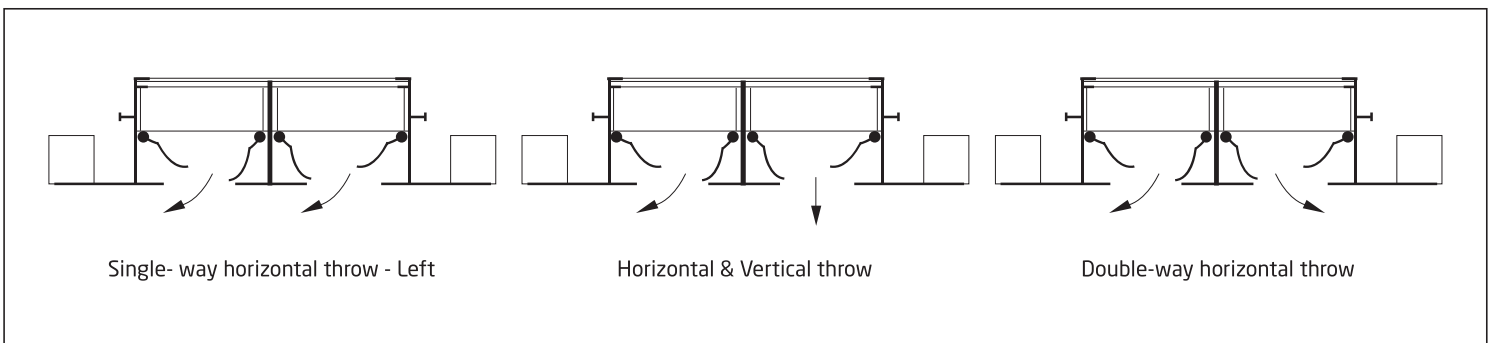
General Information:

Ventech produce Linear Slot Diffusers from specially drawn aluminium profiles. They are suitable for ceiling and high side-wall applications. Thanks to the connection possibilities of the slot diffusers it is possible to create continuous diffusers in multiple metres and with different corner angles. The two continuous blade type dampers enable to select the throw direction. Upon demand it is possible to mount sliding type volume regulating dampers at the entries of the slot diffusers.

It is also possible to produce the slot diffusers with plenum boxes. The plenum boxes are produced with side entries only, insulated or uninsulated in accordance with customer's demand. Standard colors of the diffusers are white and other colors are also possible upon customer's request.

Features:

- Made of high quality extruded aluminium profile
- Designed for variable air volume systems
- The directions and volume of the discharge air can be adjusted by moving the pattern controllers
- Full 180 ° pattern controller adjustment means there is no left or right, specifying ordering and installing are simplified
- Multiple sections are provided with alignment accessories to provide superior, positive field alignment
- Size manufactured on request
- Up to 8 slots available

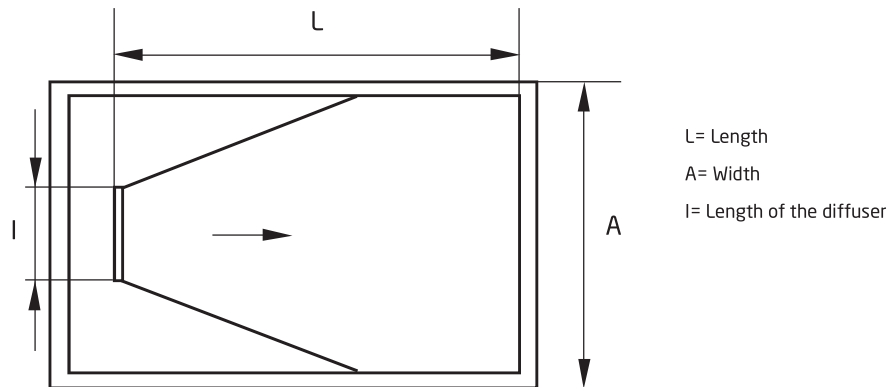


General notes on the quick selection table:

For supply or return air, fully adjustable loose core linear slot diffuser with unique air pattern control design. The air pattern can be adjusted in situ or factory, set to suit design requirements. It is suitable for ceiling mounting applications. The loose core linear slot diffuser's unique design allows the installer to simply push the complete core of the diffuser upwards to allow it to be screw fixed to the box above then simply dropped back down into the frame.

For the selection tables with lateral discharge:

- The diffuser is located along the longitudinal axis of the ceiling, next to the wall, in a room of the following size:



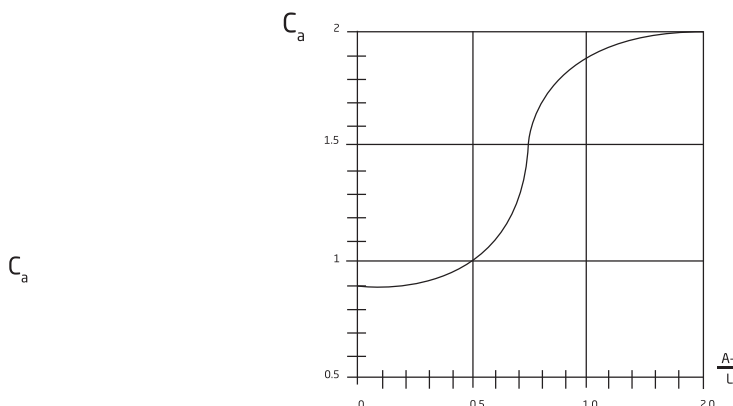
- The air jet is adherent (Coanda effect), i.e., the diffuser is mounted flush with the ceiling.

For the selection tables with vertical discharge:

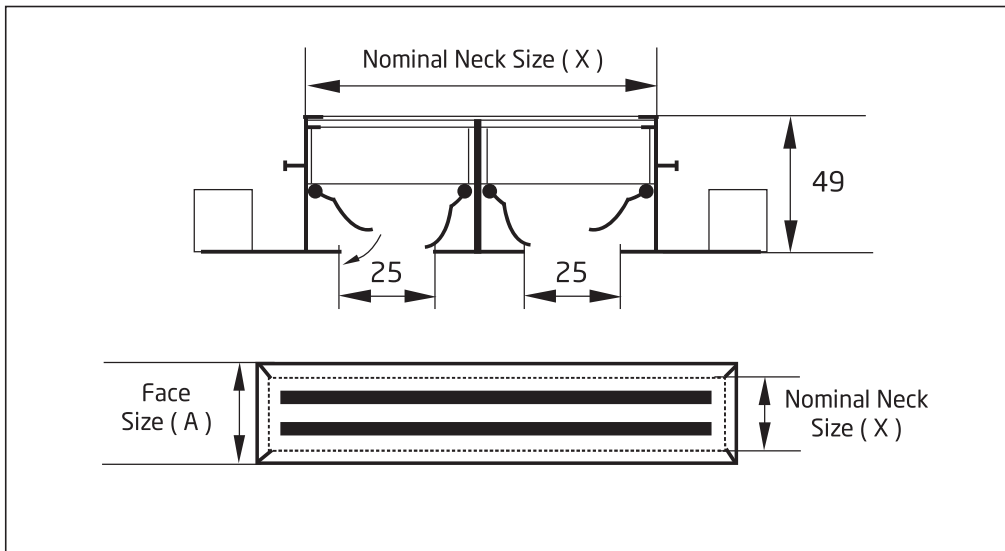
- The diffuser is located in the middle of the ceiling in a square room.
- Positioning for vertical discharge, as non-adhering jet.
- The diffuser length is less than 0.5 times the width of the room and less than 0.5 times the throw.
- The pressure P_1 is measured inside the duct upstream of the plenum box.
- The height of the room is 3 ± 0.5 m.
- The ΔT is equal to -10°C , the temperature difference between the room and the supply air.
- The maximum velocity is 0.25m/s in the occupied zone.

Correction factor for width to length ratio of the room (applied on both 20 & 25mm).

The factor is known as C_a . To calculate, divide the diffuser width less length by the length of the room. This is applicable to linear slot diffusers with lateral discharge. In diffusers with vertical discharge, C_a is equal to 1, since these diffusers have been tested in a square room ($A/L = 1$).



Linear Slot Diffuser 20



No. of Slot	Nominal Neck Metric (X)	Face Size (A)
1 Slot	40 mm	84 mm
2 Slots	76 mm	120 mm
3 Slots	111mm	155 mm
4 Slots	147 mm	191 mm
5 Slots	182 mm	226 mm
6 Slots	218 mm	262 mm

* Grilles are powder coated white as standard

* Length dimension can be modified based on different specification.

Quick Selection Table

Flow rate		Dim.	600-1	900-1	900-1	1500-1	900-2	1200-2	900-3	1500-2	1200-3	1500-3	1200-4	1500-4
(m ³ /h)	(l/s)				2000-1		600-3	600-4			900-4			
		A _k	0.00598	0.00897	0.01196	0.01495	0.01794	0.02391	0.02690	0.02989	0.03587	0.04484	0.04783	0.05978
60	16.7	V _k	2.8	1.9	1.4	1.1								
		X	1.5	1.2	1.0	0.9								
		P _t	19	8	5	3								
		NR	27	<20	<20	<20								
80	22.2	V _k	3.7	2.5	1.9	1.5	1.2							
		X	2.0	1.6	1.4	1.2	1.1							
		P _t	35	14	9	6	5							
		NR	35	27	21	<20	<20							
100	27.8	V _k	4.6	3.1	2.3	1.9	1.5	1.2	1.0					
		X	2.4	2.0	1.7	1.5	1.4	1.2	1.2					
		P _t	54	21	14	9	8	5	4					
		NR	41	33	27	23	<20	<20	<20					
140	38.9	V _k	6.5	4.3	3.3	2.6	2.2	1.6	1.4	1.3	1.1			
		X	3.4	2.8	2.4	2.2	2.0	1.7	1.6	1.5	1.4			
		P _t	106	41	28	18	15	11	8	4	4			
		NR	51	42	37	32	29	23	21	<20	<20			
180	50.0	V _k		5.6	4.2	3.3	2.8	2.1	1.9	1.7	1.4	1.1	1.0	
		X		3.6	3.1	2.8	2.5	2.2	2.1	2.0	1.8	1.6	1.6	
		P _t		68	46	30	24	18	13	7	7	5	4	
		NR		49	44	39	36	30	27	25	24	<20	<20	
200	55.6	V _k		6.2	4.6	3.7	3.1	2.3	2.1	1.9	1.5	1.2	1.2	
		X		4.0	3.5	3.1	2.8	2.4	2.3	2.2	2.0	1.8	1.7	
		P _t		84	57	36	30	22	16	9	8	6	5	
		NR		52	47	42	38	33	30	28	27	22	21	
250	69.4	V _k			5.8	4.6	3.9	2.9	2.6	2.3	1.9	1.5	1.5	1.2
		X			4.3	3.9	3.5	3.1	2.9	2.7	2.5	2.2	2.2	1.9
		P _t			89	57	47	34	24	14	13	9	8	5
		NR			53	48	45	39	37	34	33	28	27	23
300	83.3	V _k				5.6	4.6	3.5	3.1	2.8	2.3	1.9	1.7	1.4
		X				4.6	4.2	3.7	3.5	3.3	3.0	2.7	2.6	2.3
		P _t				82	68	49	35	20	19	13	11	7
		NR				53	50	44	42	40	38	33	32	28
400	111.1	V _k						4.6	4.1	3.7	3.1	2.5	2.3	1.9
		X						4.9	4.6	4.4	4.0	3.6	3.5	3.1
		P _t						87	62	35	34	23	20	13
		NR						52	50	47	46	41	40	36
500	138.9	V _k								4.6	3.9	3.1	2.9	2.3
		X								5.5	5.0	4.5	4.3	3.9
		P _t								55	53	36	32	20
		NR								54	52	48	46	42
600	166.7	V _k										3.7	3.5	2.8
		X										5.4	5.2	4.6
		P _t										52	45	29
		NR										53	51	47
700	194.4	V _k											4.1	3.3
		X											6.1	5.4
		P _t											62	40
		NR											56	51
800	222.2	V _k												3.7
		X												6.2
		P _t												52
		NR												55

Symbols:

A_k - Effective area

V_k - Effective velocity in m/s

X - Throw in metres correspond to a terminal velocity in occupied zone of 0.25m/s

Pressure (P_t) - All pressures are in Pa (N/m²)

NR - Noise level index in dB based on a room absorption and one diffuser

Quick Selection Table

Flow rate		Dim.	600-1	900-1	900-1	1500-1	900-2	1200-2	1500-2
(m ³ /h)	(l/s)				2000-1				
		A _k	0.00598	0.00897	0.01196	0.01495	0.01794	0.02391	0.02690
60	16.7	V _k	2.7	1.8					
		X	1.1	0.9					
		P _t	31	12					
		NR	20	<20					
80	22.2	V _k	3.6	2.4	1.8	1.4			
		X	1.5	1.2	1.0	0.9			
		P _t	54	21	14	9			
		NR	29	22	<20	<20			
100	27.8	V _k	4.5	3.0	2.2	1.8	1.5	1.1	
		X	1.8	1.5	1.3	1.2	1.1	0.9	
		P _t	85	33	21	14	10	6	
		NR	36	29	25	21	<20	<20	
140	38.9	V _k	3.3	4.2	3.1	2.5	2.1	1.6	1.3
		X	2.6	2.1	1.8	1.6	1.5	1.3	1.1
		P _t	166	65	42	27	20	12	7
		NR	46	39	35	41	28	24	20
180	50.0	V _k		5.4	4.0	3.2	2.7	2.0	1.6
		X		2.7	2.3	2.1	1.9	1.6	1.5
		P _t		108	69	44	32	20	11
		NR		47	42	39	36	31	28
200	55.6	V _k		6.0	4.5	3.6	3.0	2.2	1.8
		X		3.0	2.6	2.3	2.1	1.8	1.6
		P _t		133	85	54	40	24	14
		NR		50	45	42	39	34	31
250	69.4	V _k			5.6	4.5	3.7	2.8	2.2
		X			3.2	2.9	2.6	2.3	2.0
		P _t			133	85	62	38	21
		NR			52	49	46	41	38
300	83.3	V _k				5.4	4.5	3.4	2.7
		X				3.5	3.2	2.7	2.4
		P _t				122	90	54	31
		NR				54	51	47	43
400	111.1	V _k						4.5	3.6
		X						3.7	3.2
		P _t						97	54
		NR						55	52
500	138.9	V _k							4.5
		X							4.0
		P _t							85
		NR							59

Symbols:

A_k - Effective area

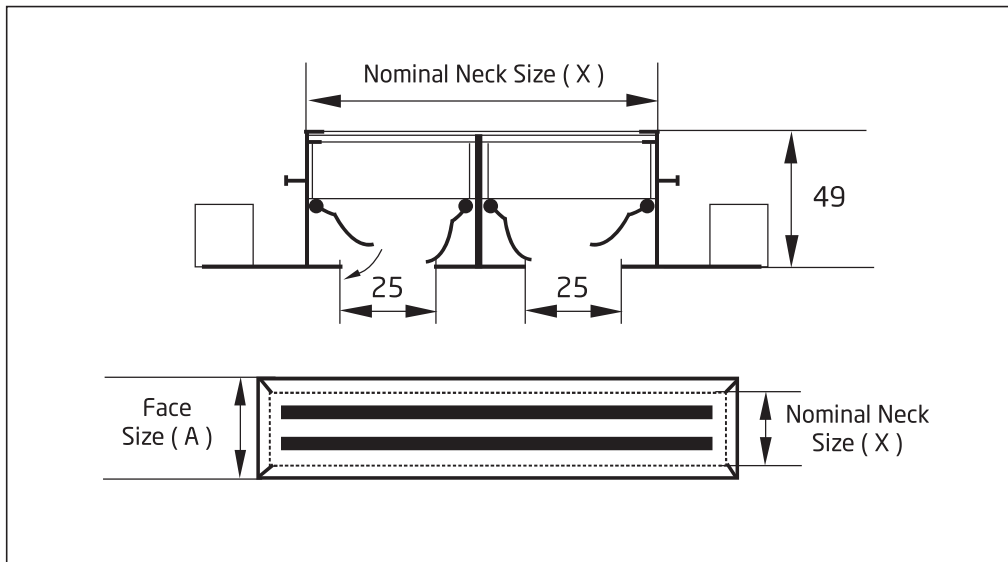
V_k - Effective velocity in m/s

X - Throw in metres correspond to a terminal velocity in occupied zone of 0.25m/s

Pressure (P_t) - All pressures are in Pa (N/m²)

NR - Noise level index in dB based on a room absorption and one diffuser

Linear Slot Diffuser 25



No. of Slot	Nominal Neck Metric (X)	Face Size (A)
1 Slot	45 mm	89 mm
2 Slots	86 mm	130 mm
3 Slots	126 mm	170 mm
4 Slots	167 mm	211 mm
5 Slots	207 mm	251 mm
6 Slots	248 mm	292 mm

* Grilles are powder coated white as standard

* Length dimension can be modified based on different specification.

Quick Selection Table

Flow rate		Dim.	600-1	900-1	1200-1	1500-1	900-2	1200-2	900-3	1500-2	1200-3	1500-3	1200-4	1500-4		
(m ³ /h)	(l/s)	A _k	0.00672	0.01007	0.01343	0.01679	0.02015	0.02687	0.03022	0.03358	0.04030	0.05037	0.05373	0.06716		
			600-2	900-2	1200-2	1500-2	900-3	1200-3	900-4	1500-4	1200-4	1500-4				
60	16.7	V _k	2.5	1.7	1.2	1.0										
		X	1.3	1.1	0.9	0.8										
		P _t	1.3	6	3	2										
		NR	27	<20	<20	<20										
80	22.2	V _k	3.3	2.2	21.7	1.3	1.1									
		X	1.7	1.4	1.2	1.1	1.0									
		P _t	23	10	6	4	3									
		NR	34	26	20	<20	<20									
100	27.8	V _k	4.1	2.8	2.1	1.7	1.4	1.0								
		X	2.2	1.8	1.5	1.4	1.3	1.1								
		P _t	37	16	9	6	4	2								
		NR	39	31	26	22	<20	<20								
140	38.9	V _k	5.8	3.9	2.9	2.3	1.9	1.4	1.3	1.2	1.0					
		X	3.0	2.5	2.1	1.9	1.8	1.5	1.4	1.4	1.2					
		P _t	72	32	18	11	8	4	3	3	2					
		NR	47	39	34	30	27	20	<20	<20	<20					
180	50.0	V _k		5.0	3.7	3.0	2.5	1.9	1.7	1.5	1.2	1.0				
		X		3.2	2.8	2.5	2.3	2.0	1.8	1.7	1.6	1.4				
		P _t		53	30	19	13	7	6	5	3	2				
		NR		45	40	36	33	27	24	22	<20	<20				
200	55.6	V _k		5.5	4.1	3.3	2.8	2.1	1.8	1.7	1.4	1.1	1.0			
		X		3.5	3.1	2.7	2.5	2.2	2.0	1.9	1.8	1.6	1.5			
		P _t		65	37	23	16	9	7	6	4	3	2			
		NR		48	43	39	35	29	26	24	20	<20	<20			
250	69.4	V _k			5.2	4.1	3.4	2.6	2.3	2.1	1.7	1.4	1.3	1.0		
		X			3.8	3.4	3.1	2.7	2.6	2.4	2.2	2.0	1.9	1.7		
		P _t			57	37	25	14	11	9	6	4	4	2		
		NR			48	44	41	34	32	29	25	21	<20	<20		
300	83.3	V _k			6.2	5.0	4.1	3.1	2.8	2.5	2.1	1.7	1.6	1.2		
		X			4.6	4.1	3.8	3.3	3.1	2.9	2.7	2.4	2.3	2.1		
		P _t			82	53	37	21	16	13	9	6	5	3		
		NR			52	48	45	39	36	34	30	26	23	<20		
400	111.1	V _k				6.6	5.5	4.1	3.7	3.3	2.8	2.2	2.1	1.7		
		X				5.5	5.0	4.3	4.1	3.9	3.5	3.2	3.1	2.7		
		P _t				94	65	37	29	23	16	10	9	6		
		NR				55	52	46	43	41	37	33	30	25		
500	138.9	V _k						5.2	4.6	4.1	3.4	2.8	2.6	2.1		
		X						5.4	5.1	4.8	4.4	4.0	3.8	3.4		
		P _t						57	45	37	25	16	14	9		
		NR						51	49	46	42	38	36	31		
600	166.7	V _k							5.5	5.0	4.1	3.3	3.1	2.5		
		X							6.1	5.8	5.3	4.7	4.6	4.1		
		P _t							65	53	37	23	21	13		
		NR							53	51	47	43	40	35		
700	194.4	V _k								5.8	4.8	3.9	3.6	2.9		
		X							6.8	6.2	5.5	5.4	4.8			
		P _t							72	50	32	28	18			
		NR							54	50	46	44	39			
800	222.2	V _k									5.5	4.4	4.1	3.3		
		X									7.1	6.3	6.1	5.5		
		P _t									65	42	37	23		
		NR									54	50	47	42		
900	250.0	V _k										5.0	4.7	3.7		
		X										7.1	6.9	6.2		
		P _t										53	46	30		
		NR										52	50	45		
1000	277.8	V _k											5.2	4.1		
		X											7.7	6.9		
		P _t											57	37		
		NR											53	48		
1200	333.3	V _k												5.0		
		X												8.2		
		P _t												53		
		NR												52		

Symbols:

A_k - Effective area

V_k - Effective velocity in m/s

X - Throw in metres correspond to a terminal velocity in occupied zone of 0.25m/s

Pressure (P_t) - All pressures are in Pa (N/m²)

NR - Noise level index in dB based on a room absorption and one diffuser

Quick Selection Table

Flow rate		Dim.	600-1	900-1	1200-1	1500-1	900-2	1200-2	900-3	1500-2	1200-3	1500-3	1200-4	1500-4		
(m ³ /h)	(l/s)	A _k	0.00701	0.01052	0.01402	0.01753	0.02104	0.02805	0.03156	0.03506	0.04207	0.05259	0.05610	0.07012		
			600-2		600-3	600-4					900-4					
60	16.7	V _k	2.4	1.6	1.2	1.0										
		X	1.1	0.9	0.7	0.7										
		P _t	13	6	3	2										
		NR	26	<20	<20	<20										
80	22.2	V _k	3.2	2.1	1.6	1.3	1.1									
		X	1.4	1.1	1.0	0.9	0.8									
		P _t	22	10	6	4	2									
		NR	33	24	<20	<20	<20									
100	27.8	V _k	4.0	2.6	2.0	1.6	1.3	1.0								
		X	1.8	1.4	1.2	1.1	1.0	0.9								
		P _t	35	16	9	6	4	2								
		NR	38	29	23	<20	<20	<20								
140	38.9	V _k	5.5	3.7	2.8	2.2	1.8	1.4	1.2	1.1						
		X	2.5	2.0	1.7	1.6	1.4	1.2	1.2	1.1						
		P _t	69	30	17	11	8	4	3	3						
		NR	46	37	31	26	22	<20	<20	<20						
180	50.0	V _k		4.8	3.6	2.9	2.4	1.8	1.6	1.4	1.2	1.0				
		X		2.6	2.2	2.0	1.8	1.6	1.5	1.4	1.3	1.2				
		P _t		50	28	18	13	7	6	5	3	2				
		NR		43	37	32	28	21	<20	<20	<20	<20				
200	55.6	V _k		5.3	4.0	3.2	2.6	2.0	1.8	1.4	1.3	1.1	1.0			
		X		2.9	2.5	2.2	2.0	1.8	1.7	1.4	1.4	1.3	1.2			
		P _t		62	35	22	16	9	7	5	4	2	2			
		NR		46	40	34	30	24	21	<20	<20	<20	<20			
250	69.4	V _k			5.0	4.0	3.3	2.5	2.2	2.0	1.7	1.3	1.2			
		X			3.1	2.8	2.5	2.2	2.1	2.0	1.8	1.6	1.5			
		P _t			55	35	24	14	11	9	6	4	3			
		NR			45	40	36	29	27	24	20	<20	<20			
300	83.3	V _k			5.9	4.8	4.0	3.0	2.6	2.4	2.0	1.6	1.5	1.2		
		X			3.7	3.3	3.0	2.6	2.5	2.3	2.1	1.9	1.9	1.7		
		P _t			79	50	35	20	16	13	9	6	5	3		
		NR			49	44	40	34	31	29	25	20	<20	<20	<20	
400	111.1	V _k				6.3	5.3	4.0	3.5	3.2	2.6	2.1	2.0	1.6		
		X				4.4	4.0	3.5	3.3	3.1	2.9	2.6	2.5	2.2		
		P _t				90	62	35	28	22	16	10	9	6		
		NR				51	47	41	38	36	32	27	25	20		
500	138.9	V _k						5.0	4.4	4.0	3.3	2.6	2.5	2.0		
		X						4.4	4.1	3.9	3.6	3.2	3.1	2.8		
		P _t						55	43	35	24	16	14	9		
		NR						46	44	41	37	32	31	26		
600	166.7	V _k							5.3	4.8	4.0	3.2	3.0	2.4		
		X						5.0	4.7	4.3	3.8	3.7	3.3			
		P _t						62	50	35	22	20	13			
		NR						48	46	42	37	35	30			
700	194.4	V _k								5.5	4.6	3.7	3.5	2.8		
		X						5.5	5.0	4.5	4.3	3.9				
		P _t						69	48	30	27	17				
		NR						50	45	40	39	34				
800	222.2	V _k									5.3	4.2	4.0	3.2		
		X									5.7	5.1	5.0	4.4		
		P _t									62	40	35	22		
		NR									49	44	44	37		
900	250.0	V _k										4.8	4.5	3.6		
		X										5.8	5.0	5.0		
		P _t										50	6.2	28		
		NR										47	55	40		
1000	277.8	V _k											4.8	4.0		
		X												5.5		
		P _t												35		
		NR												43		
1200	333.3	V _k												4.8		
		X												6.6		
		P _t												50		
		NR												47		

Symbols:

A_k - Effective area

V_k - Effective velocity in m/s

X - Throw in metres correspond to a terminal velocity in occupied zone of 0.25m/s

Pressure (P_t) - All pressures are in Pa (N/m²)

NR - Noise level index in dB based on a room absorption and one diffuser