

Single Deflection Grille

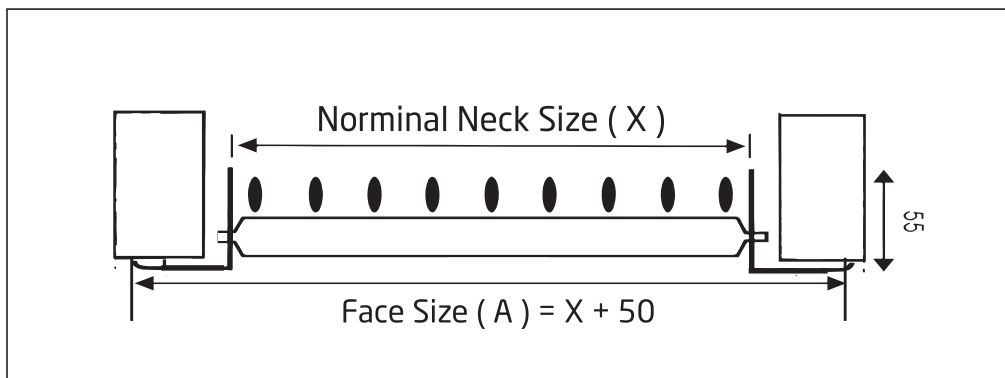
General Information:

For supply air, having a single set of fully adjustable blades to give directional control of the air pattern in two directions if required. Suitable for wall or duct mounting. Also available with curved face for circular duct installations.

From extruded aluminium sections, ensuring functional strength and performance that also gives an attractive and aesthetically pleasing appearance. Incorporating a single set of individually adjustable blades, the blades may be set either horizontally or at angles, either up or down. Powder coated white as standard with optional colors and finishes available on request.

Features:

- Made of high quality extruded aluminium profile
- Blades are movable on horizontal or vertical lines
- Mounting by screws or spring clips
- Powder coated white as standard



General notes on the quick selection table:

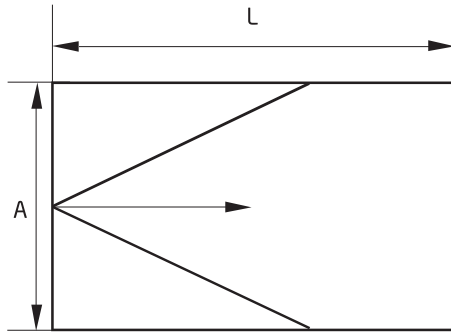


Fig 1

Some correction factors exist as a function of the ratio between room width and length, the blade deflection angle and the distance from grille to ceiling, and are defined in the following manner:

A/L: Ratio between the width and the length of the room to be conditioned. For example, for a room with a width of 4.5m and length of 4.5m the factor A/L equals 1 (see fig 1).

C_a: Factor obtained from the graph. For example, if the value of A/L = 1 and for a grille with 0° blade angle, the value of C_a equals 1.3 (see fig 2).

C_h: Correction factor for height, obtained from the distance between grille and ceiling.

For a free jet C_h is always 1.1.

For example, if the grille is located at 0.2m from the ceiling the factor C_h equals 1 (see fig 3&4).

Once calculated, the correction factor for the throw (K_c) can be determined by the following formula:

$$K_c = C_a * C_h$$

$$K_c = 1.3 * 1$$

In this case of selection by table, we would obtain the correction throw (X_c):

$$X_c = K_c * X$$

$$X_c = 1.3 * X$$

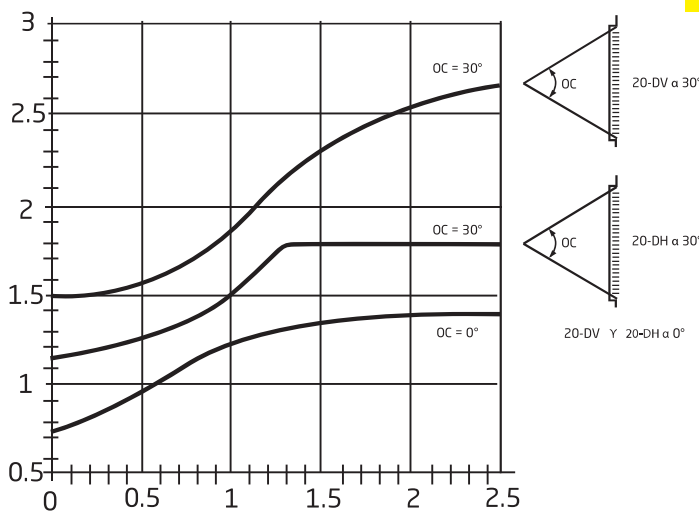


Fig 2

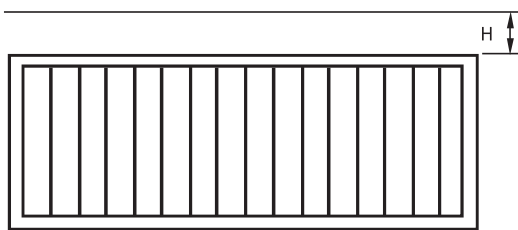
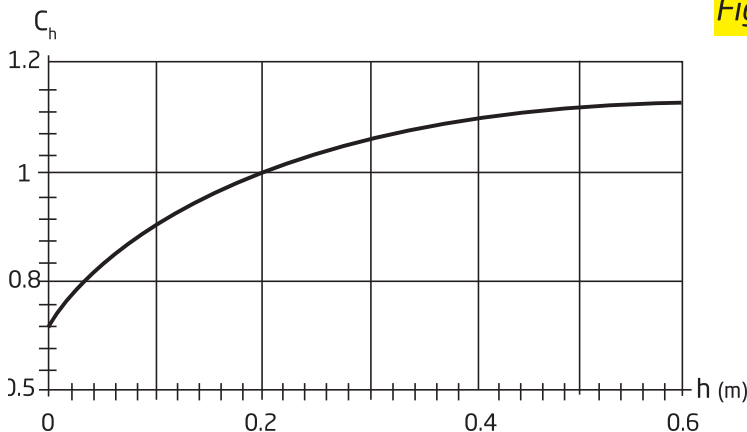


Fig 3

Fig 4



Quick Selection Table

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	200 x 100		250 x 100		300 x 100 200 x 150		250 x 150		300 x 150		350 x 150 250 x 200		600 x 100 400 x 150 300 x 200		500 x 150 350 x 200		600 x 150 450 x 200 350 x 250 300 x 300		600 x 200 500 x 250 400 x 300		1000 x 150 750 x 200 600 x 250 500 x 300		1200 x 150 900 x 200 750 x 250 600 x 300		1100 x 200 900 x 250 750 x 300		1200 x 250 1000 x 300	
			A _k	0.00098		0.00125		0.0148		0.0183		0.0224		0.0262		0.0309		0.0381		0.0474		0.0660		0.0801		0.0970		0.1210		0.1670
(m ³ /h)	(l/s)	Ø	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°
600	166.7	V _k					9.04	9.04	7.28	7.28	6.72	5.92	5.12	5.12	4.32	4.32	3.52	3.52	2.8	2.8	2	2	1.68	1.68	1.36	1.36	1.12	1.12	0.8	0.8
		X					11.7	9.46	10.6	8.47	9.57	7.7	8.91	7.15	8.14	6.49	7.37	5.94	6.6	5.28	5.61	4.51	5.06	4.07	4.62	3.74	4.18	3.3	3.52	2.86
		P _t					40.5	48.7	26.5	31.8	17.6	21.2	12.9	15.5	9.28	11.2	6.16	7.36	3.92	4.72	2.08	2.48	1.36	1.68	0.96	1.12	0.64	0.72	0.32	0.4
		NR					41.4	43.2	37.8	39.6	34.2	36	31.5	33.3	27.9	29.7	24.3	26.1	20.7	22.5	15.3	17.1	11.7	13.5	8.1	9.9	4.5	6.3	-	-
650	180.6	V _k					9.76	9.76	7.92	7.92	6.48	6.48	5.52	5.52	4.64	4.64	3.76	3.76	3.04	3.04	2.16	2.16	1.84	1.84	2.32	1.52	1.2	1.2	0.88	0.88
		X					12.7	10.2	11.5	9.24	10.4	8.36	9.57	7.7	8.8	7.04	7.92	6.38	7.15	5.72	6.05	4.84	5.5	4.4	4.95	3.96	4.51	3.63	3.85	3.08
		P _t					47.6	57.1	31.1	37.3	20.8	24.9	15.2	18.2	10.9	13.1	7.2	8.64	4.64	5.6	2.4	2.88	1.6	1.92	1.12	1.36	0.72	0.88	0.4	0.48
		NR					43.2	45	39.6	41.4	36	37.8	33.3	35.1	29.7	31.5	26.1	27.9	22.5	24.3	16.2	18	13.5	15.3	9.9	11.7	6.3	8.1	-	-
700	194.4	V _k					8.48	8.48	6.96	6.96	5.92	5.92	5.04	5.04	4.08	4.08	3.28	3.28	2.32	2.32	1.92	1.92	1.6	1.6	1.28	1.28	0.96	0.96		
		X					12.4	9.9	11.2	8.91	10.3	8.25	9.57	7.59	8.58	6.82	7.7	6.16	6.49	5.17	5.94	4.73	5.39	4.29	4.84	3.85	4.07	3.3		
		P _t					36.1	43.3	24	28.9	17.6	21.1	12.6	15.2	8.32	10	5.36	6.48	2.8	3.36	1.92	2.24	1.28	1.52	0.8	0.96	0.4	0.56		
		NR					40.5	42.3	36.9	38.7	34.2	36	31.5	33.3	27.9	29.7	24.3	26.1	18	19.8	15.3	17.1	11.7	13.5	7.2	9	-	-		
750	208.3	V _k					9.12	9.12	7.44	7.44	6.4	6.4	5.36	5.36	4.4	4.4	3.52	3.52	2.56	2.56	2.08	2.08	1.68	1.68	1.36	1.36	0.96	0.96		
		X					13.1	10.6	11.9	9.57	11.1	8.91	10.2	8.14	9.24	7.37	8.25	6.6	7.04	5.61	6.38	5.06	5.72	4.62	5.17	4.18	4.4	3.52		
		P _t					41.4	49.7	27.6	33.2	20.2	24.2	14.5	17.4	9.6	11.5	6.16	7.44	3.2	3.84	2.16	2.56	1.44	1.76	0.96	1.12	0.48	0.56		
		NR					42.3	44.1	38.7	40.5	36	37.8	33.3	35.1	29.7	31.5	25.2	27	19.8	21.6	16.2	18	12.6	14.4	9	10.8	-	-		
800	222.2	V _k					9.68	9.68	7.92	7.92	6.8	6.8	5.76	5.76	4.64	4.64	3.76	3.76	2.72	2.72	2.24	2.24	1.84	1.84	1.44	1.44	1.04	1.04		
		X					12.9	10.3	11.6	9.3	10.8	8.6	9.9	7.9	8.9	7.1	8	6.4	6.8	5.4	6.2	4.9	5.6	4.5	5	4	4.3	3.4		
		P _t					14.1	11.3	12.7	10.2	11.8	9.46	10.8	8.69	9.79	7.81	8.8	7.04	7.48	5.94	6.82	5.39	6.16	4.95	5.5	4.4	4.73	3.74		
		NR					44.1	45.9	40.5	42.3	37.8	39.6	34.2	36	30.6	32.4	27	28.8	21.6	23.4	18	19.8	14.4	16.2	10.8	12.6	-	-		
850	236.1	V _k					8.4	8.4	7.2	7.2	6.08	6.08	4.96	4.96	4	4	2.88	2.88	2.32	2.32	1.92	1.92	1.6	1.6	1.12	1.12				
		X					13.6	10.8	12.5	10	11.5	9.24	10.4	8.36	9.35	7.48	7.92	6.38	7.15	5.72	6.49	5.28	5.83	4.73	4.95	3.96				
		P _t					35.5	42.6	26	31.2	18.7	22.4	12.3	14.7	7.92	9.52	4.08	4.88	2.8	3.36	1.92	2.24	1.2	1.44	0.64	0.8				
		NR					41.4	43.2	38.7	40.5	36	37.8	32.4	34.2	27.9	29.7	22.5	24.3	18.9	20.7	15.3	17.1	11.7	13.5	6.3	8.1				
900	250.0	V _k					8.96	8.96	7.6	7.6	6.48	6.48	5.28	5.28	4.24	4.24	3.04	3.04	2.48	2.48	2.08	2.08	1.68	1.68	1.2	1.2				
		X					14.4	11.5	13.3	10.6	12.2	9.79	11	8.8	9.9	7.92	8.36	6.71	7.59	6.05	6.93	5.5	6.16	4.95	5.28	4.18				
		P _t					39.8	47.8	29.1	34.9	20.9	25.1	13.7	16.5	8.88	10.7	4.56	5.52	3.12	3.76	2.16	2.56	1.36	1.6	0.72	0.88				
		NR					43.2	45	39.6	41.4	36.9	38.7	33.3	35.1	29.7	31.5	23.4	25.2	20.7	22.5	17.1	18.9	13.5	15.3	7.2	9				
950	263.9	V _k					9.44	9.44	8.08	8.08	6.8	6.8	5.52	5.52	4.48	4.48	3.2	3.2	2.64	2.64	2.16	2.16	1.76	1.76	1.28	1.28				
		X					15.2	12.2	14.1	11.2	13.0	10.3	11.7	9.4	10.5	8.4	8.8	7.0	8.0	6.4	7.3	5.8	6.5	5.3	5.6	4.4				
		P _t					44.4	53.3	32.5	39.0	23.4	28.0	15.4	18.4	9.9	11.9	5.1	6.2	3.4	4.2	2.4	2.9	1.5	1.8	0.8	1.0				
		NR					44.1	45.9	41.4	43.2	38.7	40.5	34.2	36.0	30.6	32.4	25.2	27.0	21.6	23.4	18.0	19.8	14.4	16.2	9.0	10.8				
1000	277.8	V _k					8.5	8.5	7.2	7.2	5.8	5.8	4.7	4.7	3.4	3.4	2.8	2.8	2.3	2.3	1.8	1.8	1.4	1.4						
		X					14.7	11.9	13.6	10.9	12.3	9.8	11.0	8.8	9.4	7.5	8.5	6.8	7.7	6.2	6.9	5.5	5.8	4.7						
		P _t					36.0	43.2	25.8	31.0	17.0	20.4	11.0	13.2	5.7	6.8	3.8	4.6	2.6	3.1	1.7	2.0	0.9	1.0						
		NR					42.3	44.1	39.6	41.4	36.0	37.8	31.5	33.3	26.1	27.9	22.5	24.3	18.9	20.7	15.3	17.1	9.9	11.7						
1100	305.6	V _k					9.4	9.4	7.9	7.9	6.4	6.4	5.1	5.1	3.7	3.7	3.0	3.0	2.6	2.6	2.0	2.0	1.4	1.4						
		X					16.3	13.0	15.0	12.0	13.5	10.8	12.1	9.7	10.2	8.3	9.4	7.5	8.5	6.8	7.6	6.1	6.5	5.2						
		P _t					43.5	52.2	31.3	37.5	20.6	24.7	13.3	15.9	6.9	8.2	4.6	5.6	3.2	3.8	2.1	2.5	1.0	1.3						
		NR					44.1	45.9	41.4	43.2	37.8	39.6	34.2	36.0	27.9	29.7	25.2	27.0	21.6	23.4	17.1	18.9	11.7	13.5						

Quick Selection Table

Flow rate		Dim	200 x 100		250 x 100		300 x 100 200 x 150		250 x 150		300 x 150		350 x 150 250 x 200		600 x 100 400 x 150 300 x 200		500 x 150 350 x 200		600 x 150 450 x 200 350 x 250 300 x 300		600 x 200 500 x 250 400 x 300		1000 x 150 750 x 200 600 x 250 500 x 300		1200 x 150 900 x 200 750 x 250 600 x 300		1100 x 200 900 x 250 750 x 300		1200 x 250 1000 x 300		
			A _k	0.00098		0.00125		0.0148		0.0183		0.0224		0.0262		0.0309		0.0381		0.0474		0.0660		0.0801		0.0970		0.1210		0.1670	
(m ³ /h)	(l/s)	∅	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	
1200	333.3	V _k													8.6	8.6	7.0	7.0	5.6	5.6	4.1	4.1	3.4	3.4	2.7	2.7	2.2	2.2	1.6	1.6	
		X													16.4	13.1	14.7	11.8	13.2	10.6	11.2	8.9	10.1	8.1	9.2	7.4	8.3	6.6	7.0	5.6	
		P _t													46.5	55.9	30.6	36.7	19.8	23.7	10.2	12.2	6.9	8.3	4.7	4.7	3	3.6	1.6	1.9	
		NR													43.2	45.0	39.6	41.4	36.0	37.8	29.7	31.5	27.0	28.8	23.4	25.2	19.8	21.6	13.5	15.3	
1300	361.1	V _k													9.4	9.4	7.6	7.6	6.1	6.1	4.4	4.4	3.6	3.6	3.0	3.0	2.4	2.4	1.8	1.8	
		X													17.7	14.2	16.0	12.8	14.3	11.4	12.1	9.7	11.0	8.8	10.0	8.0	8.9	7.2	7.6	6.1	
		P _t													43.7	52.5	28.7	34.5	18.6	22.3	9.6	11.5	6.5	7.8	4.4	5.4	2.9	3.4	1.5	1.8	
		NR													45.0	46.8	41.4	43.2	37.8	39.6	31.5	33.3	28.8	30.6	25.2	27.0	21.6	23.4	15.3	17.1	
1400	388.9	V _k													10.1	10.1	8.2	8.2	6.6	6.6	4.7	4.7	3.9	3.9	3.2	3.2	2.6	2.6	1.8	1.8	
		X													19.0	15.3	17.2	13.8	15.4	12.3	13.1	10.5	11.9	9.5	10.8	8.6	9.7	7.7	8.3	6.6	
		P _t													50.7	60.8	33.4	40.0	21.5	25.8	11.1	13.4	7.5	9.0	5.1	6.2	3.3	4.0	1.8	2.1	
		NR													46.8	48.6	43.2	45.0	39.6	41.4	33.3	35.1	29.7	31.5	27.0	28.8	22.5	24.3	17.1	18.9	
1500	416.7	V _k														8.7	8.7	7.0	7.0	5.0	5.0	4.2	4.2	3.4	3.4	2.7	2.7	2.0	2.0		
		X													18.4	14.7	16.5	13.2	14.0	11.2	12.7	10.1	11.6	9.2	10.3	8.3	8.8	7.0			
		P _t													38.2	45.9	24.7	29.7	12.7	15.3	8.6	10.4	5.9	7.1	3.8	4.6	2.0	2.4			
		NR													45.0	46.8	40.5	42.3	35.1	36.9	31.5	33.3	27.9	29.7	24.3	26.1	18.9	20.7			
1600	444.4	V _k														9.4	9.4	7.5	7.5	5.4	5.4	4.4	4.4	3.7	3.7	3.0	3.0	2.2	2.2		
		X													19.6	15.7	17.6	14.1	15.0	11.9	13.5	10.8	12.3	9.8	11.0	8.8	9.4	7.5			
		P _t													43.5	52.2	28.2	33.8	14.5	17.4	9.8	11.8	6.7	8.1	4.3	5.2	2.2	2.7			
		NR													45.9	47.7	42.3	44.1	36.0	37.8	33.3	35.1	29.7	31.5	26.1	27.9	19.8	21.6			
1700	472.2	V _k														8.0	8.0	5.8	5.8	4.7	4.7	3.9	3.9	3.1	3.1	2.2	2.2				
		X													18.7	15.0	15.8	12.7	14.4	11.6	13.1	10.5	11.7	9.4	10.0	7.9					
		P _t													31.8	46.1	16.4	19.7	11.1	13.4	7.6	9.1	4.9	5.8	2.6	3.0					
		NR													43.2	45.0	37.8	39.6	34.2	36.0	30.6	32.4	27.0	28.8	21.6	23.4					
1800	500.0	V _k														8.4	8.4	6.1	6.1	5.0	5.0	4.2	4.2	3.3	3.3	2.4	2.4				
		X													19.8	15.8	16.8	13.4	15.2	12.2	13.9	11.1	12.4	9.9	10.6	8.5					
		P _t													35.6	42.7	18.4	22.0	12.5	15.0	8.5	10.2	5.4	6.6	2.9	3.4					
		NR													45.0	46.8	38.7	40.5	35.1	36.9	32.4	34.2	27.9	29.7	22.5	24.3					
1900	527.8	V _k														8.9	8.9	6.4	6.4	5.3	5.3	4.3	4.3	3.5	3.5	2.6	2.6				
		X													20.9	16.7	17.7	14.2	16.1	12.9	14.6	11.7	13.1	10.5	11.1	8.9					
		P _t													39.7	47.6	20.5	24.6	13.9	16.6	9.4	11.4	6.1	7.3	3.2	3.8					
		NR													45.9	47.7	40.5	42.3	36.9	38.7	33.3	35.1	29.7	31.5	23.4	25.2					
2000	555.6	V _k														9.4	9.4	6.7	6.7	5.5	5.5	4.6	4.6	3.7	3.7	2.6	2.6				
		X													22.0	17.6	18.6	15.0	16.9	13.5	15.4	12.3	13.8	11.0	11.8	9.4					
		P _t													43.9	52.7	22.6	27.2	15.4	18.5	10.5	12.6	6.7	8.1	3.5	4.2					
		NR													46.8	48.6	41.4	43.2	37.8	39.6	34.2	36.0	30.6	32.4	25.2	27.0					
2100	583.3	V _k																			7.0	7.0	5.8	5.8	4.8	4.8	3.8	3.8	2.8	2.8	
		X																			19.6	15.6	17.8	14.2	16.2	12.9	14.4	11.6	12.3	9.8	
		P _t																				25.0	30.0	17.0	20.4	11.6	13.9	7.4	9.0	3.9	4.7
		NR																				42.3	44.1	38.7	40.5	35.1	36.9	31.5	33.3	26.1	27.9

Quick Selection Table

Flow rate		Dim	200 x 100		250 x 100		300 x 100 200 x 150		250 x 150		300 x 150		350 x 150 250 x 200		600 x 100 400 x 150 300 x 200		500 x 150 350 x 200		600 x 150 450 x 200 350 x 250 300 x 300		600 x 200 500 x 250 400 x 300		1000 x 150 750 x 200 600 x 250 500 x 300		1200 x 150 900 x 200 750 x 250 600 x 300		1100 x 200 900 x 250 750 x 300		1200 x 250 1000 x 300				
			A _k	0.00098		0.00125		0.0148		0.0183		0.0224		0.0262		0.0309		0.0381		0.0474		0.0660		0.0801		0.0970		0.1210		0.1670			
(m ³ /h)	(l/s)	∅	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	
2200	611.1	V _k																				7.4	7.4	6.1	6.1	5.0	5.0	4.1	4.1	3.0	3.0		
		X																					20.5	16.4	18.6	14.9	16.9	13.5	15.2	12.1	12.9	10.3	
		P _t																						27.4	33.0	18.6	22.3	12.7	15.3	8.2	9.8	4.3	5.1
		NR																						43.2	45.0	39.6	41.4	36.9	38.7	32.4	34.2	27.0	28.8
2400	666.7	V _k																					8.1	8.1	6.6	6.6	5.5	5.5	4.4	4.4	3.2	3.2	
		X																					22.3	17.9	20.4	16.3	18.5	14.7	16.5	13.2	14.1	11.2	
		P _t																						32.6	39.2	22.2	26.6	15.1	18.2	9.7	11.7	5.1	6.1
		NR																						45.0	46.8	41.4	43.2	38.7	40.5	34.2	36.0	28.8	30.6
2600	722.2	V _k																					8.7	8.7	7.2	7.2	5.9	5.9	4.8	4.8	3.4	3.4	
		X																					24.2	19.4	22.0	17.6	20.0	16.0	17.9	14.3	15.2	12.2	
		P _t																						38.3	46.0	26.0	31.2	17.8	21.3	11.4	13.7	6.0	7.2
		NR																						46.8	48.6	43.2	45.0	40.5	42.3	36.0	37.8	30.6	32.4
2800	777.8	V _k																							7.8	7.8	6.4	6.4	5.1	5.1	3.8	3.8	
		X																							23.7	18.9	21.6	17.3	19.3	15.4	16.4	13.1	
		P _t																								30.2	36.2	20.6	24.7	13.2	15.8	7.0	8.3
		NR																								45.0	46.8	41.4	43.2	37.8	39.6	32.4	34.2
3000	833.3	V _k																							8.3	8.3	6.9	6.9	5.5	5.5	4.0	4.0	
		X																							25.4	20.4	23.1	18.5	20.7	16.5	17.6	14.1	
		P _t																								34.6	41.6	23.6	28.3	15.2	18.2	8.0	9.6
		NR																								46.8	48.6	43.2	45.0	39.6	41.4	34.2	36.0
3200	888.9	V _k																								7.4	7.4	5.8	5.8	4.2	4.2		
		X																								24.6	19.7	22.0	17.6	18.7	15.0		
		P _t																								26.9	32.2	17.3	20.7	9.0	10.9		
		NR																								45.0	46.8	40.5	42.3	35.1	36.9		
3500	972.2	V _k																								8.0	8.0	6.4	6.4	4.6	4.6		
		X																								27.0	21.6	24.1	19.3	20.5	16.4		
		P _t																								32.2	38.6	20.6	24.8	10.9	13.0		
		NR																								46.8	48.6	43.2	45.0	36.9	38.7		
3800	1056.6	V _k																								8.7	8.7	7.0	7.0	5.0	5.0		
		X																								29.3	23.3	26.2	20.9	22.2	17.8		
		P _t																								37.9	45.4	24.3	29.2	12.8	15.4		
		NR																								48.6	50.4	45.0	46.8	38.7	40.5		
4100	1138.9	V _k																										7.5	7.5	5.4	5.4		
		X																									28.3	22.6	24.0	19.3			
		P _t																									28.3	34.0	14.9	17.8			
		NR																								45.9	47.7	40.5	42.3				
4500	1250.0	V _k																										8.2	8.2	6.0	6.0		
		X																									31.0	24.8	26.4	21.1			
		P _t																									34.2	41.0	17.9	21.5			
		NR																								48.6	50.4	42.3	44.1				