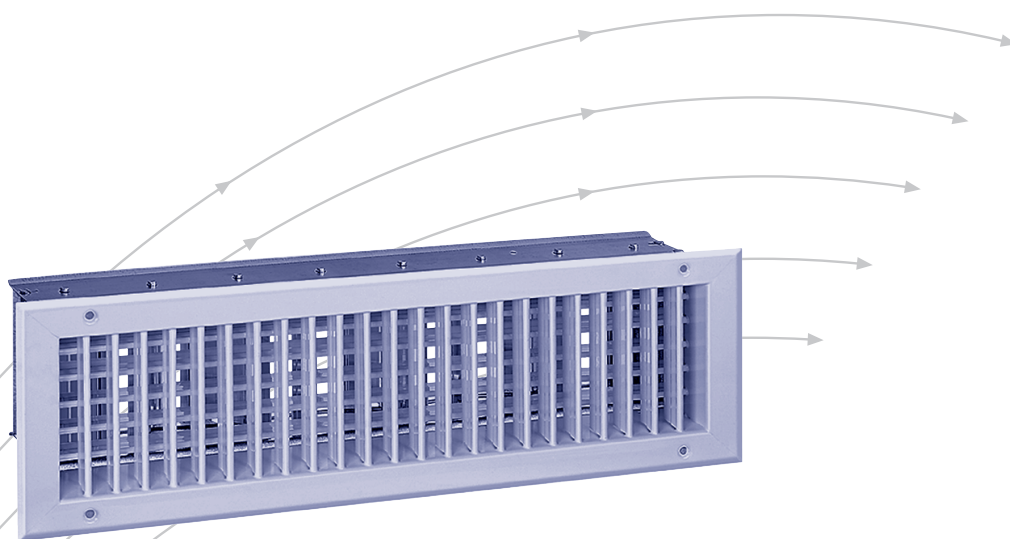


Diffusion grilles type DG...

Dimensioning

Discharging vertically from above



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Application

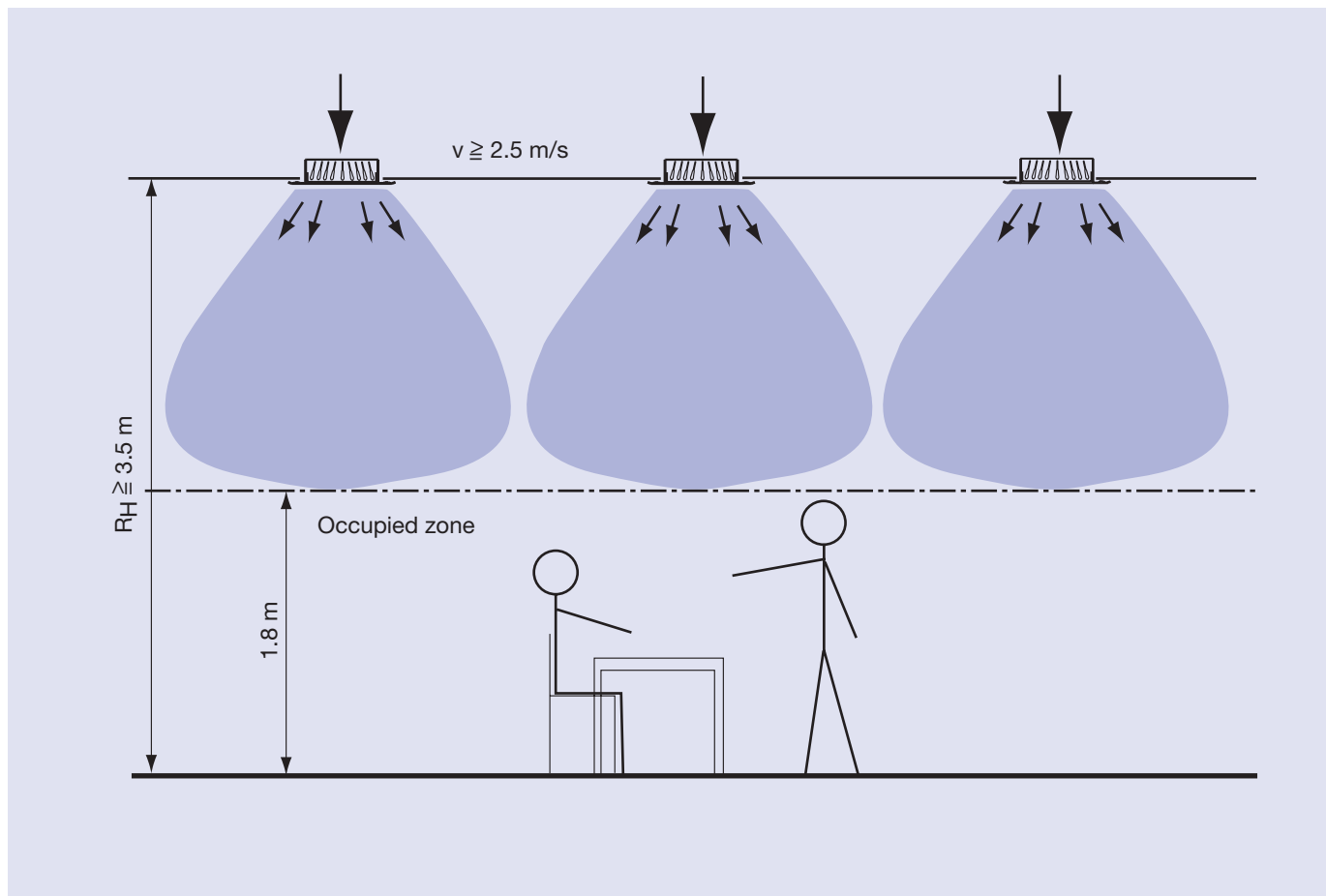
Vertical introduction of supply air from above into rooms higher than 3.5 metres.

Avantages

- Simple, economic solution for high rooms
- Good purging and even distribution of the fresh air
- No heat „cushion“ under the ceiling with warm air heating
- No cold air intrusion when cooling
- Einfache Kanalführung

Basic conditions

- Room height at least 3.8 metres, maximum 10.0 meters
- Effective discharge velocity at the grille at least 2.5 m/s
- Diverging blade angles at the grille (preferably 84°)



Concept

Why do diffusion grilles always have to be set divergently when air is introduced from above?

Straight blade position

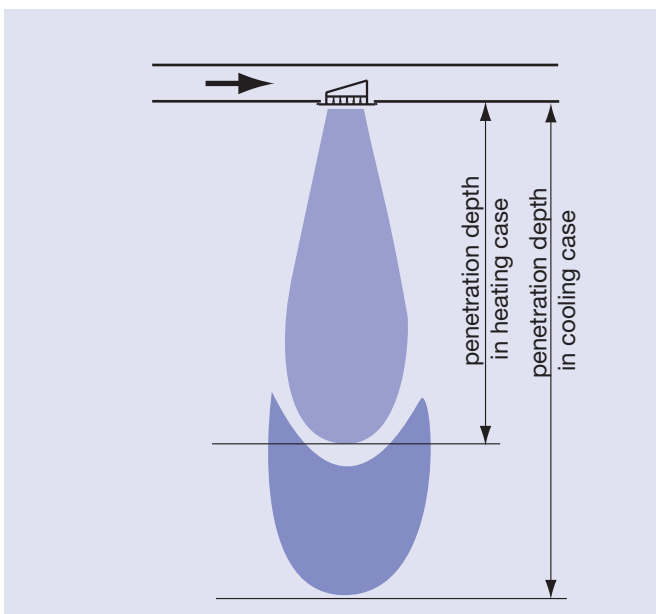
- Large variations in the vertical penetration depth dependent on Δt .
- Large throw distance

Divergent blade position

- Small variations in the penetration depth
- Large induction
- Small temperature difference at the end of the air stream
- Short throw distances

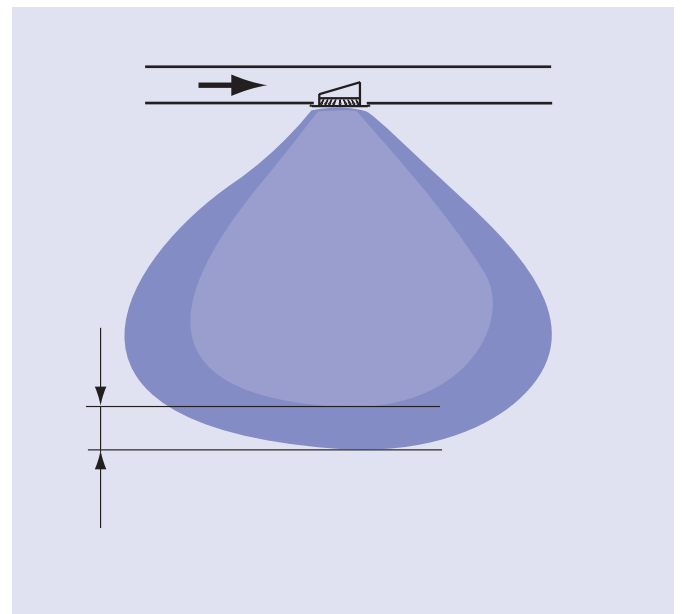
Discharge situation with straight blade position

Large differences in throw distance between the hot and cold cases.



Discharge situation with divergent blade position

Small differences in throw distance between the hot and cold cases.



Determination of approximate diffuser size

Which nominal grille height H is to be aimed at for different room heights R_H ?

- $H = 50$ mm for room height R_H from approx. 3.5 to 4.0 m
- $H = 100$ mm for room height R_H from approx. 4.0 to 5.0 m
- $H = 150$ mm for room height R_H from approx. 5.0 to 6.0 m
- $H = 200$ mm for room height R_H from approx. 6.0 to 7.0 m
- $H = 250$ mm for room height R_H from approx. 7.0 to 10.0 m

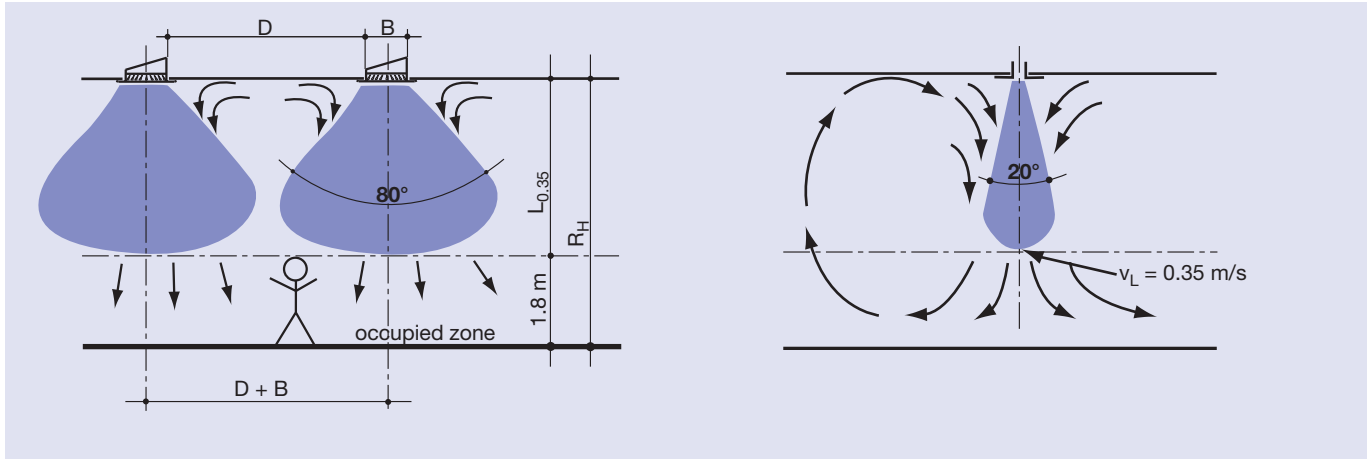
Which nominal grille width B is to be aimed at for different room heights R_H ?

- $B = 500$ mm for room height R_H from approx. 3.5 to 4.0 m
- $B = 600$ mm for room height R_H from approx. 4.0 to 5.5 m
- $B = 750$ mm for room height R_H from approx. 5.5 to 7.0 m
- $B = 900$ mm for room height R_H from > 7.0 m

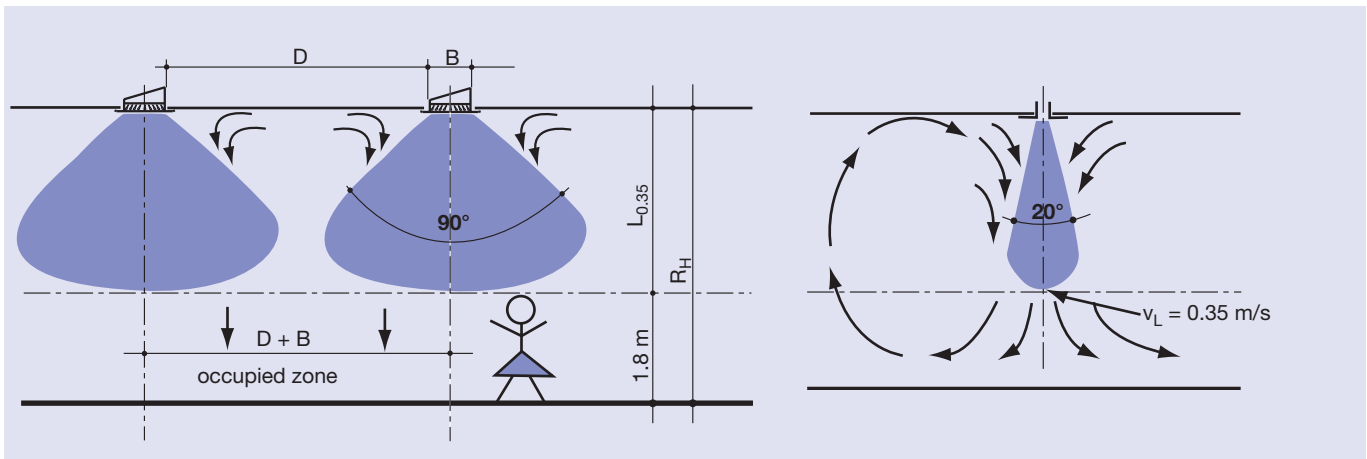
Images of the jet

Images of the jet by different diverging

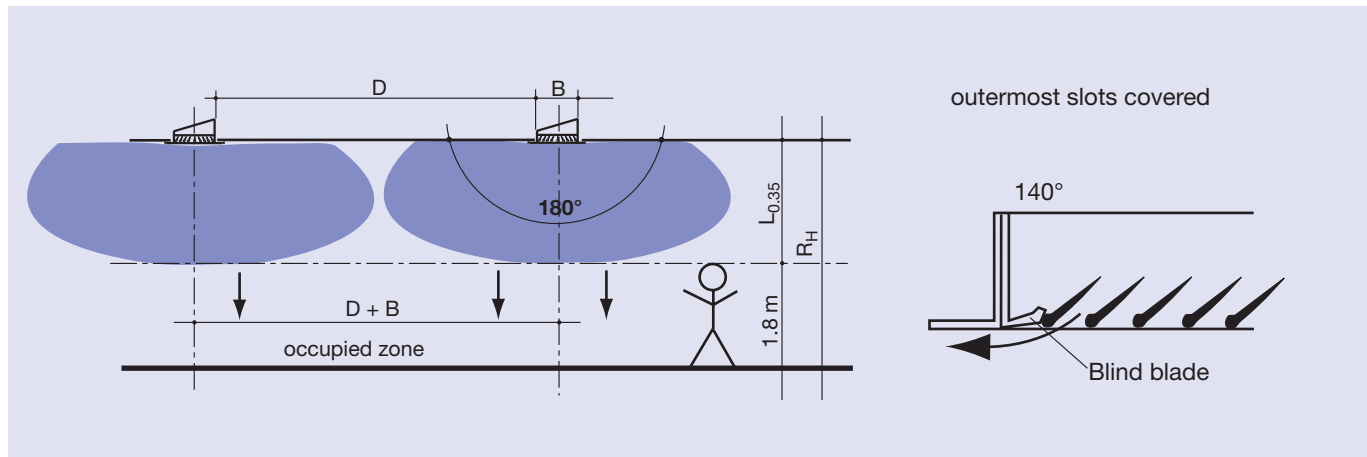
Blade position 84° divergent



Blade position 110° divergent



Blade position 140° divergent



Grille:		500 x 50		Area of air volume rate: = 169 to 270 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	169	203	236	270	169	203	236	270	169	203	236	270	169	203	236	270	169	203	236	270	169	203	236	270	169	203	236	270
V _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	6.0	6.7	7.5	8.2	5.4	6.1	6.8	7.5	7.1	8.0	8.8	9.7																
L0.35	[m] 0°	4.2	4.9	5.7	6.4	3.6	4.3	5.0	5.7	5.3	6.2	7.0	7.9	2.0	2.5	3.0	3.5	0.9	1.2	1.6	2.0	1.1	1.3	1.4	1.6				
RH	[m]	6.3	7.2	8.0	8.9	6.1	6.9	7.7	8.6	6.8	7.8	8.7	9.6																
L0.35	[m] geg.	4.5	5.4	6.2	7.1	4.3	5.1	5.9	6.8	5.0	6.0	6.9	7.8	3.5	4.2	5.0	5.7	3.0	3.7	4.3	5.0	1.2	1.4	1.5	1.7				
RH	[m]	4.7	5.2	5.7	6.2	4.4	4.9	5.4	5.9	5.1	5.7	6.3	6.9																
L0.35	[m] 44°	2.9	3.4	3.9	4.4	2.6	3.1	3.6	4.1	3.3	3.9	4.5	5.1	1.9	2.3	2.7	3.2	1.4	1.8	2.1	2.5	2.2	2.5	2.8	3.2				
RH	[m]	3.7	4.1	4.5	4.8	3.6	4.0	4.3	4.7	3.9	4.3	4.7	5.1																
L0.35	[m] 84°	1.9	2.3	2.7	3.0	1.8	2.2	2.5	2.9	2.1	2.5	2.9	3.3	1.5	1.8	2.2	2.5	1.3	1.6	1.9	2.2	2.1	2.5	2.8	3.1				
RH	[m]	3.2	3.4	3.7	4.0	3.1	3.4	3.7	3.9	3.3	3.5	3.8	4.1																
L0.35	[m] 110°	1.4	1.6	1.9	2.2	1.3	1.6	1.9	2.1	1.5	1.7	2.0	2.3	1.2	1.5	1.7	2.0	1.1	1.4	1.6	1.9	2.2	2.4	2.8	3.3				
RH	[m]	2.9	3.1	3.4	3.6	2.9	3.1	3.3	3.5	2.9	3.2	3.4	3.6																
L0.35	[m] 140°	1.1	1.3	1.6	1.8	1.1	1.3	1.5	1.7	1.1	1.4	1.6	1.8	1.0	1.3	1.5	1.7	1.0	1.2	1.4	1.6	3.7	4.3	5.3	5.9				

Grille:		600 x 50		Area of air volume rate: = 203 to 324 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	203	243	284	324	203	243	284	324	203	243	284	324	203	243	284	324	203	243	284	324	203	243	284	324	203	243	284	324
V _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	6.1	6.8	7.6	8.3	5.5	6.2	6.9	7.6	4.9	5.6	6.2	6.8																
L0.35	[m] 0°	4.3	5.0	5.8	6.5	3.7	4.4	5.1	5.8	3.1	3.8	4.4	5.0	2.0	2.5	3.0	3.5	0.8	1.2	1.6	2.0	1.2	1.3	1.5	1.6				
RH	[m]	6.4	7.3	8.2	9.0	6.1	7.0	7.8	8.7	5.9	6.7	7.5	8.3																
L0.35	[m] geg.	4.6	5.5	6.4	7.2	4.3	5.2	6.0	6.9	4.1	4.9	5.7	6.5	3.5	4.3	5.0	5.8	3.0	3.7	4.4	5.1	1.3	1.4	1.6	1.8				
RH	[m]	4.7	5.3	5.8	6.3	4.5	5.0	5.5	6.0	4.2	4.7	5.2	5.7																
L0.35	[m] 44°	2.9	3.5	4.0	4.5	2.7	3.2	3.7	4.2	2.4	2.9	3.4	3.9	1.9	2.3	2.8	3.2	1.4	1.8	2.1	2.5	2.2	2.6	3.0	3.3				
RH	[m]	3.8	4.1	4.5	4.9	3.7	4.0	4.4	4.7	3.6	3.9	4.3	4.6																
L0.35	[m] 84°	2.0	2.3	2.7	3.1	1.9	2.2	2.6	2.9	1.8	2.1	2.5	2.8	1.5	1.9	2.2	2.5	1.3	1.6	1.9	2.3	2.2	2.5	2.9	3.3				
RH	[m]	3.2	3.5	3.7	4.0	3.2	3.4	3.7	4.0	3.1	3.4	3.6	3.9																
L0.35	[m] 110°	1.4	1.7	1.9	2.2	1.4	1.6	1.9	2.2	1.3	1.6	1.8	2.1	1.2	1.5	1.7	2.0	1.1	1.4	1.6	1.9	2.2	2.6	2.9	3.3				
RH	[m]	2.9	3.2	3.4	3.6	2.9	3.1	3.4	3.6	2.9	3.1	3.3	3.6																
L0.35	[m] 140°	1.1	1.4	1.6	1.8	1.1	1.3	1.6	1.8	1.1	1.3	1.5	1.8	1.1	1.3	1.5	1.7	1.0	1.2	1.4	1.7	3.8	4.7	5.3	5.9				

Technical Data

Grille:		750 x 50		Area of air volume rate: = 253 to 405 m ³ /h																					
		Cooling case								Isotherme				Heating case								Distance of grilles D			
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$							
V	[m ³ /h]	253	304	354	405	253	304	354	405	253	304	354	405	253	304	354	405	253	304	354	405	253	304	354	405
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	6.2	7.0	7.7	8.5	5.6	6.3	7.0	7.7	5.0	5.6	6.3	6.9												
L0.35	[m] 0°	4.4	5.2	5.9	6.7	3.8	4.5	5.2	5.9	3.2	3.8	4.5	5.1	2.0	2.5	3.0	3.5	0.8	1.1	1.5	1.9	1.3	1.5	1.6	1.8
RH	[m]	6.5	7.4	8.3	9.2	6.2	7.1	7.9	8.8	5.9	6.8	7.6	8.4												
L0.35	[m] geg.	4.7	5.6	6.5	7.4	4.4	5.3	6.1	7.0	4.1	5.0	5.8	6.6	3.6	4.3	5.1	5.9	3.0	3.7	4.4	5.1	1.4	1.5	1.7	1.9
RH	[m]	4.8	5.3	5.9	6.4	4.5	5.0	5.5	6.1	4.2	4.7	5.2	5.7												
L0.35	[m] 44°	3.0	3.5	4.1	4.6	2.7	3.2	3.7	4.3	2.4	2.9	3.4	3.9	1.9	2.3	2.8	3.2	1.4	1.8	2.1	2.5	2.4	2.7	3.1	3.4
RH	[m]	3.8	4.2	4.6	4.9	3.7	4.1	4.4	4.8	3.6	3.9	4.3	4.6												
L0.35	[m] 84°	2.0	2.4	2.8	3.1	1.9	2.3	2.6	3.0	1.8	2.1	2.5	2.8	1.6	1.9	2.2	2.6	1.4	1.7	2.0	2.3	2.3	2.7	3.1	3.4
RH	[m]	3.2	3.5	3.8	4.1	3.2	3.5	3.7	4.0	3.1	3.4	3.7	3.9												
L0.35	[m] 110°	1.4	1.7	2.0	2.3	1.4	1.7	1.9	2.2	1.3	1.6	1.9	2.1	1.2	1.5	1.8	2.0	1.2	1.4	1.7	1.9	2.3	2.7	3.1	3.5
RH	[m]	2.9	3.2	3.4	3.6	2.9	3.2	3.4	3.6	2.9	3.1	3.4	3.6												
L0.35	[m] 140°	1.1	1.4	1.6	1.8	1.1	1.4	1.6	1.8	1.1	1.3	1.6	1.8	1.1	1.3	1.5	1.7	1.0	1.3	1.5	1.7	3.8	4.8	5.4	6.0

Grille:		500 x 100		Area of air volume rate: = 338 to 540 m ³ /h																					
		Cooling case								Isotherme				Heating case								Distance of grilles D			
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$							
V	[m ³ /h]	338	405	473	540	338	405	473	540	338	405	473	540	338	405	473	540	338	405	473	540	338	405	473	540
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	11.0	12.5	14.0		9.2	10.6	11.9	13.2	7.5	8.6	9.7	10.8												
L0.35	[m] 0°	9.2	10.7	12.2	-	7.4	8.8	10.1	11.4	5.7	6.8	7.9	9.0	2.1	2.8	3.6	4.4	-	-	-	-	2.1	2.4	2.7	3.0
RH	[m]	10.8	12.5	14.1		10.0	11.5	13.1	14.7	9.1	10.6	12.1	13.6												
L0.35	[m] geg.	9.0	10.7	12.3	-	8.2	9.7	11.3	12.9	7.3	8.8	10.3	11.8	5.7	7.0	8.3	9.6	4.1	5.1	6.3	7.4	2.1	2.4	2.7	3.1
RH	[m]	7.7	8.8	9.8	10.8	6.9	7.9	8.9	9.8	6.2	7.0	7.9	8.8												
L0.35	[m] 44°	5.9	7.0	8.0	9.0	5.1	6.1	7.1	8.0	4.4	5.2	6.1	7.0	2.8	3.5	4.2	4.9	1.2	1.8	2.3	2.8	4.1	4.9	5.5	6.2
RH	[m]	5.6	6.3	7.0	7.7	5.3	6.0	6.6	7.3	5.0	5.6	6.2	6.9												
L0.35	[m] 84°	3.8	4.5	5.2	5.9	3.5	4.2	4.8	5.5	3.2	3.8	4.4	5.1	2.5	3.1	3.7	4.2	1.9	2.4	2.9	3.4	3.9	4.6	5.2	6.3
RH	[m]	4.4	4.9	5.4	5.9	4.3	4.8	5.3	5.8	4.2	4.6	5.1	5.6												
L0.35	[m] 110°	2.6	3.1	3.6	4.1	2.5	3.0	3.5	4.0	2.4	2.8	3.3	3.8	2.1	2.6	3.0	3.5	1.9	2.3	2.7	3.1	4.1	4.7	5.4	6.1
RH	[m]	3.9	4.3	4.7	5.1	1.8	1.8	4.6	5.0	3.8	4.2	4.6	5.0												
L0.35	[m] 140°	2.1	2.5	2.9	3.3	2.0	2.4	2.8	3.2	2.0	2.4	2.8	3.2	1.9	2.3	2.6	3.0	1.8	2.1	2.5	2.9	6.8	8.0	9.3	10.5

Grille:		600 x 100		Area of air volume rate: = 405 to 648 m³/h																					
		Cooling case								Isotherme				Heating case								Distance of grilles D			
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$							
V	[m³/h]	405	486	567	648	405	486	567	648	405	486	567	648	405	486	567	648	405	486	567	648	405	486	567	648
V_{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	11.4	13.0	14.6		9.5	10.9	12.3	13.6	7.6	8.8	9.9	11.1												
L0.35	[m] 0°	9.6	11.2	12.8	-	7.7	9.1	10.5	11.8	5.8	7.0	8.1	9.3	2.0	2.7	3.5	4.3	-	-	-	-	2.3	2.6	2.9	3.2
RH	[m]	11.1	12.8	14.5		10.2	11.9	13.5	15.1	9.4	10.9	12.4	13.9												
L0.35	[m] geg.	9.3	11.0	12.7	-	8.4	10.1	11.7	13.3	7.6	9.1	10.6	12.1	5.8	7.1	8.4	9.7	4.0	5.1	6.2	7.4	2.2	2.5	2.9	3.2
RH	[m]	7.9	9.0	10.1	11.2	7.1	8.1	9.1	10.1	6.3	7.2	8.1	9.0												
L0.35	[m] 44°	6.1	7.2	8.3	9.4	5.3	6.3	7.3	8.3	4.5	5.4	6.3	7.2	2.8	3.5	4.2	4.9	1.1	1.6	2.2	2.7	4.3	5.0	5.8	6.5
RH	[m]	5.7	6.5	7.2	7.9	5.4	6.1	6.8	7.5	5.1	5.7	6.4	7.0												
L0.35	[m] 84°	3.9	4.7	5.4	6.1	3.6	4.3	5.0	5.7	3.3	3.9	4.6	5.2	2.6	3.1	3.7	4.3	1.9	2.4	2.9	3.4	4.0	4.8	5.5	6.1
RH	[m]	4.5	5.0	5.6	6.1	4.4	4.9	5.4	5.9	4.2	4.7	5.2	5.7												
L0.35	[m] 110°	2.7	3.2	3.8	4.3	2.6	3.1	3.6	4.1	2.4	2.9	3.4	3.9	2.2	2.6	3.1	3.5	1.9	2.3	2.7	3.2	4.0	4.7	5.5	6.1
RH	[m]	4.0	4.4	4.8	5.2	3.9	4.3	4.7	5.1	3.8	4.2	4.6	5.1												
L0.35	[m] 140°	2.2	2.6	3.0	3.4	2.1	2.5	2.9	3.3	2.0	2.4	2.8	3.3	1.9	2.3	2.7	3.1	1.8	2.2	2.6	2.9	7.2	8.4	9.7	10.9

Grille:		750 x 100		Area of air volume rate: = 506 to 810 m³/h																					
		Cooling case								Isotherme				Heating case								Distance of grilles D			
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$							
V	[m³/h]	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810
V_{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	11.9	13.6			9.8	11.3	12.7	14.1	7.8	9.0	10.2	11.4												
L0.35	[m] 0°	10.1	11.8	-	-	8.0	9.5	10.9	12.3	6.0	7.2	8.4	9.6	1.9	2.6	3.4	4.1	-	-	-	-	2.4	2.8	3.1	3.4
RH	[m]	11.5	13.3	15.0		10.5	12.2	13.9	15.5	9.6	11.1	12.7	14.2												
L0.35	[m] geg.	9.7	11.5	13.2	-	8.7	10.4	12.1	13.7	7.8	9.3	10.9	12.4	5.9	7.2	8.6	9.9	4.0	5.1	6.2	7.4	2.4	2.7	3.1	3.4
RH	[m]	8.2	9.3	10.5	11.6	7.3	8.3	9.4	10.4	6.4	7.3	8.3	9.2												
L0.35	[m] 44°	6.4	7.5	8.7	9.8	5.5	6.5	7.6	8.6	4.6	5.5	6.5	7.4	2.8	3.5	4.2	5.0	1.0	1.5	2.0	2.6	4.6	5.3	6.1	6.8
RH	[m]	5.9	6.6	7.4	8.1	5.5	6.2	6.9	7.6	5.2	5.8	6.5	7.2												
L0.35	[m] 84°	4.1	4.8	5.6	6.3	3.7	4.4	5.1	5.8	3.4	4.0	4.7	5.4	2.6	3.2	3.8	4.4	1.9	2.4	2.9	3.4	4.3	5.0	5.7	6.4
RH	[m]	4.6	5.2	5.7	6.2	4.5	5.0	5.5	6.0	4.3	4.8	5.3	5.8												
L0.35	[m] 110°	2.8	3.4	3.9	4.4	2.7	3.2	3.7	4.2	2.5	3.0	3.5	4.0	2.2	2.7	3.2	3.6	1.9	2.3	2.8	3.2	4.2	5.0	5.7	6.4
RH	[m]	4.0	4.5	4.9	5.3	4.0	4.4	4.8	5.2	3.9	4.3	4.7	5.2												
L0.35	[m] 140°	2.2	2.7	3.1	3.5	2.2	2.6	3.0	3.4	2.1	2.5	2.9	3.4	2.0	2.4	2.8	3.2	1.8	2.2	2.6	3.0	7.3	8.8	10.1	11.3

Technical Data

Grille:		900 x 100		Area of air volume rate: = 608 to 972 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10\text{ K}$				$\Delta t = -5\text{ K}$				$\Delta t = 0\text{ K}$				$\Delta t = +10\text{ K}$				$\Delta t = +20\text{ K}$											
V	[m ³ /h]	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972
V _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]	12.2	13.9			10.1	11.5	13.0	14.4	7.9	9.1	10.3	11.6																
L0.35	[m] 0°	10.4	12.1	-	-	8.3	9.7	11.2	12.6	6.1	7.3	8.5	9.8	1.8	2.5	3.3	4.0	-	-	-	-	2.6	2.9	3.3	3.6				
RH	[m]	11.7	13.6			10.7	12.4	14.1		9.7	11.3	12.9	14.5																
L0.35	[m] geg.	9.9	11.8	-	-	8.9	10.6	12.3	-	7.9	9.5	11.1	12.7	5.9	7.3	8.6	10.0	3.9	5.0	6.2	7.4	2.5	2.9	3.2	3.6				
RH	[m]	8.4	9.6	10.7	11.8	7.4	8.5	9.5	10.6	6.5	7.4	8.4	9.3																
L0.35	[m] 44°	6.6	7.8	8.9	10.0	5.6	6.7	7.7	8.8	4.7	5.6	6.6	7.5	2.8	3.5	4.3	5.0	-	1.4	1.9	2.5	4.8	5.6	6.3	7.0				
RH	[m]	6.0	6.8	7.5	8.3	5.6	6.3	7.1	7.8	5.2	5.9	6.6	7.3																
L0.35	[m] 84°	4.2	5.0	5.7	6.5	3.8	4.5	5.3	6.0	3.4	4.1	4.8	5.5	2.6	3.2	3.8	4.4	1.9	2.4	2.9	3.4	4.5	5.3	5.9	6.7				
RH	[m]	4.7	5.2	5.8	6.3	4.5	5.1	5.6	6.1	4.4	4.9	5.4	5.9																
L0.35	[m] 110°	2.9	3.4	4.0	4.5	2.7	3.3	3.8	4.3	2.6	3.1	3.6	4.1	2.2	2.7	3.2	3.7	1.9	2.4	2.8	3.3	4.4	5.1	5.9	6.6				
RH	[m]	4.1	4.5	5.0	5.4	4.0	4.4	4.9	5.3	3.9	4.4	4.8	5.2																
L0.35	[m] 140°	2.3	2.7	3.2	3.6	2.2	2.6	3.1	3.5	2.1	2.6	3.0	3.4	2.0	2.4	2.8	3.2	1.9	2.3	2.7	3.1	7.7	8.9	10.4	11.7				

Grille:		500 x 150		Area of air volume rate: = 506 to 810 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10\text{ K}$				$\Delta t = -5\text{ K}$				$\Delta t = 0\text{ K}$				$\Delta t = +10\text{ K}$				$\Delta t = +20\text{ K}$											
V	[m ³ /h]	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810	506	608	709	810
V _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m] 0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RH	[m]																												
L0.35	[m] geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RH	[m]	10.7	12.2	13.7		9.2	10.6	12.0	13.3	7.8	9.8	10.2	11.4																
L0.35	[m] 44°	8.9	10.4	11.9	-	7.4	8.8	10.2	11.5	6.0	7.2	8.4	9.6	3.2	4.1	5.0	5.9	-	-	1.5	2.1	6.1	7.1	8.1	9.0				
RH	[m]	7.3	8.3	9.4	10.3	6.8	7.7	8.6	9.6	6.2	7.1	7.8	8.8																
L0.35	[m] 84°	5.5	6.5	7.6	8.5	5.0	5.9	6.8	7.8	4.4	5.3	6.0	7.0	3.2	4.0	4.7	5.5	2.1	2.7	3.3	3.9	5.5	6.5	7.5	8.3				
RH	[m]	5.6	6.3	7.0	7.7	5.3	6.0	6.7	7.4	5.1	5.7	6.4	7.1																
L0.35	[m] 110°	3.8	4.5	5.2	5.9	3.5	4.2	4.9	5.6	3.3	3.9	4.6	5.3	2.8	3.4	4.0	4.6	2.3	2.9	3.4	4.0	5.4	6.3	7.3	8.2				
RH	[m]	4.7	5.3	5.9	6.4	4.6	5.2	5.8	6.3	4.5	5.1	5.6	6.2																
L0.35	[m] 140°	2.9	3.5	4.1	4.6	2.8	3.4	4.0	4.5	2.7	3.3	3.8	4.4	2.5	3.1	3.6	4.1	2.3	2.8	3.3	3.9	9.3	11.2	13.0	14.6				

Grille:		600 x 150		Area of air volume rate: = 608 to 972 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10\text{ K}$				$\Delta t = -5\text{ K}$				$\Delta t = 0\text{ K}$				$\Delta t = +10\text{ K}$				$\Delta t = +20\text{ K}$											
V	[m ³ /h]	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972	608	729	851	972
V _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m] 0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RH	[m]																												
L0.35	[m] geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RH	[m]	11.5	12.8	14.4		9.6	11.1	12.5	13.9	8.1	9.3	10.6	11.8																
L0.35	[m] 44°	9.7	11.0	12.6	-	7.8	9.3	10.7	12.1	6.3	7.5	8.8	10.0	3.1	4.0	4.9	5.9	-	-	1.1	1.7	6.5	7.5	8.6	9.6				
RH	[m]	7.6	8.7	9.7	10.8	7.0	8.0	9.0	9.9	6.4	7.3	8.2	9.1																
L0.35	[m] 84°	5.8	6.9	7.9	9.0	5.2	6.2	7.2	8.1	4.6	5.5	6.4	7.3	3.3	4.0	4.8	5.6	2.0	2.6	3.2	3.9	5.8	6.9	7.8	8.9				
RH	[m]	5.7	6.5	7.2	8.0	5.5	6.2	6.9	7.6	5.2	5.9	6.6	7.3																
L0.35	[m] 110°	3.9	4.7	5.4	6.2	3.7	4.4	5.1	5.8	3.4	4.1	4.8	5.5	2.9	3.5	4.1	4.8	2.4	2.9	3.5	4.1	5.6	6.7	7.6	8.7				
RH	[m]	4.9	5.5	6.1	6.6	4.8	5.3	5.9	6.5	4.6	5.2	5.8	6.4																
L0.35	[m] 140°	3.1	3.7	4.3	4.8	3.0	3.5	4.1	4.7	2.8	3.4	4.0	4.6	2.6	3.2	3.7	4.3	2.4	2.9	3.5	4.0	10.0	11.8	13.7	15.2				

Technical Data

Grille:		750 x 150		Area of air volume rate: = 759 to 1215 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	759	911	1063	1215	759	911	1063	1215	759	911	1063	1215	759	911	1063	1215	759	911	1063	1215	759	911	1063	1215	759	911	1063	1215
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																												
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		11.8	13.5			10.1	11.6	13.1	14.6	8.3	9.6	10.9	12.2															
L0.35	[m]	44°	10.0	11.7	-	-	8.3	9.8	11.3	12.8	6.5	7.8	9.1	10.4	3.0	3.9	4.9	5.8	-	-	-	1.2	7.0	8.1	9.2	10.3			
RH	[m]		8.0	9.1	10.2	11.3	7.3	8.3	9.3	10.3	6.5	7.5	8.4	9.4															
L0.35	[m]	84°	6.2	7.3	8.4	9.5	5.5	6.5	7.5	8.5	4.7	5.7	6.6	7.6	3.3	4.1	4.9	5.7	1.9	2.5	3.2	3.8	6.3	7.4	8.4	9.4			
RH	[m]		5.9	6.7	7.5	8.3	5.7	6.4	7.1	7.9	5.4	6.1	6.8	7.5															
L0.35	[m]	110°	4.1	4.9	5.7	6.5	3.9	4.6	5.3	6.1	3.6	4.3	5.0	5.7	3.0	3.6	4.3	4.9	2.4	3.0	3.6	4.2	6.0	7.0	8.1	9.2			
RH	[m]		5.0	5.6	6.3	6.9	4.9	5.5	6.1	6.7	4.8	5.4	6.0	6.5															
L0.35	[m]	140°	3.2	3.8	4.5	5.1	3.1	3.7	4.3	4.9	3.0	3.6	4.2	4.7	2.7	3.3	3.9	4.4	2.5	3.0	3.6	4.1	10.4	12.2	14.4	16.3			

Grille:		900 x 150		Area of air volume rate: = 911 to 1458 m ³ /h																									
		Cooling rate								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	911	1094	1276	1458	911	1094	1276	1458	911	1094	1276	1458	911	1094	1276	1458	911	1094	1276	1458	911	1094	1276	1458	911	1094	1276	1458
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																												
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		12.3	14.1			10.4	12.0	13.5	15.0	8.5	9.9	11.2	12.5															
L0.35	[m]	44°	10.5	12.3	-	-	8.6	10.2	11.7	13.2	6.7	8.1	9.4	10.7	2.9	3.9	4.8	5.7	-	-	-	-	7.4	8.5	9.6	10.8			
RH	[m]		8.2	9.4	10.5	11.6	7.4	8.5	9.6	10.6	6.7	7.7	8.6	9.6															
L0.35	[m]	84°	6.4	7.6	8.7	9.8	5.6	6.7	7.8	8.8	4.9	5.9	6.8	7.8	3.3	4.1	5.0	5.8	1.8	2.4	3.1	3.7	6.6	7.7	8.8	9.8			
RH	[m]		6.1	6.9	7.7	8.5	5.8	6.5	7.3	8.1	5.5	6.2	6.9	7.7															
L0.35	[m]	110°	4.3	5.1	5.9	6.7	4.0	4.7	5.5	6.3	3.7	4.4	5.1	5.9	3.0	3.7	4.4	5.0	2.4	3.0	3.6	4.2	6.3	7.4	8.5	9.5			
RH	[m]		5.1	5.8	6.4	7.0	5.0	5.6	6.2	6.9	4.9	5.5	6.1	6.7															
L0.35	[m]	140°	3.3	4.0	4.6	5.2	3.2	3.8	4.4	5.1	3.1	3.7	4.3	4.9	2.8	3.4	4.0	4.5	2.5	3.1	3.6	4.2	10.8	12.9	14.8	16.7			

Grille:		500 x 200		Area of air volume rate: = 675 à 1080 m ³ /h																									
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	675	810	945	1080	675	810	945	1080	675	810	945	1080	675	810	945	1080	675	810	945	1080	675	810	945	1080	675	810	945	1080
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																												
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		13.4				11.3	13.1	14.8			9.3	10.8	12.2	13.7														
L0.35	[m]	44°	11.6	-	-	-	9.5	11.3	13.0	-	-	7.5	9.0	10.4	11.9	3.3	4.3	5.3	6.4	-	-	-	-	7.9	9.2	10.4	11.7		
RH	[m]		8.9	10.2	11.5	12.7	8.1	9.3	10.4	11.6	7.2	8.3	9.4	10.5															
L0.35	[m]	84°	7.1	8.4	9.7	10.9	6.3	7.5	8.6	9.8	5.4	6.5	7.6	8.7	3.7	4.6	5.5	6.4	2.0	2.7	3.4	4.2	7.0	8.3	9.5	10.6			
RH	[m]		6.6	7.5	8.3	9.2	6.2	7.1	7.9	8.8	5.9	6.7	7.5	8.3															
L0.35	[m]	110°	4.8	5.7	6.5	7.4	4.4	5.3	6.1	7.0	4.1	4.9	5.7	6.5	3.4	4.1	4.8	5.6	2.7	3.3	4.0	4.7	6.8	8.0	9.0	10.3			
RH	[m]		5.5	6.2	6.9	7.6	5.3	6.0	6.7	7.4	5.2	5.9	6.5	7.2															
L0.35	[m]	140°	3.7	4.4	5.1	5.8	3.5	4.2	4.9	5.6	3.4	4.1	4.7	5.4	3.1	3.7	4.4	5.0	2.8	3.4	4.0	4.7	11.8	13.9	16.1	18.3			

Technical Data

Grille:		600 x 200																								Area of air volume flow: = 810 to 1296 m ³ /h			
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	810	972	1134	1296	810	972	1134	1296	810	972	1134	1296	810	972	1134	1296	810	972	1134	1296	810	972	1134	1296	810	972	1134	1296
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																												
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		14.4				12.0	13.8					9.6	11.2	12.8	14.3													
L0.35	[m]	44°	12.6	-	-	-	10.2	12.0	-	-	-	-	7.8	9.4	11.0	12.5	3.1	4.1	5.2	6.3	-	-	-	-	8.6	9.9	11.3	12.6	
RH	[m]		9.4	10.8	12.1	13.5	8.5	9.7	11.0	12.2	7.5	8.6	9.8	10.9															
L0.35	[m]	84°	7.6	9.0	10.3	11.7	6.7	7.9	9.2	10.4	5.7	6.8	8.0	9.1	3.8	4.7	5.6	6.6	1.8	2.5	3.3	4.0	7.6	8.9	10.1	11.4			
RH	[m]		6.9	7.8	8.7	9.7	6.5	7.4	8.3	9.2	6.1	6.9	7.8	8.6															
L0.35	[m]	110°	5.1	6.0	6.9	7.9	4.7	5.6	6.5	7.4	4.3	5.1	6.0	6.8	3.5	4.2	5.0	5.8	2.7	3.4	4.1	4.8	7.2	8.4	9.6	11.0			
RH	[m]		5.7	6.4	7.2	7.9	5.5	6.3	7.0	7.7	5.4	6.1	6.8	7.5															
L0.35	[m]	140°	3.9	4.6	5.4	6.1	3.7	4.5	5.2	5.9	3.6	4.3	5.0	5.7	3.2	3.9	4.6	5.3	2.9	3.5	4.2	4.8	12.5	14.6	17.1	19.3			

Grille:		750 x 200																								Area of air volume rate: = 1013 to 1620 m ³ /h			
		Cooling case								Isotherme				Heating case								Distance of grilles D							
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$											
V	[m ³ /h]	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0
RH	[m]																												
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																												
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]					12.7	14.7						10.0	11.7	13.3	15.0													
L0.35	[m]	44°	-	-	-	-	10.9	12.9	-	-	-	-	8.2	9.9	11.5	13.2	2.8	3.9	4.9	6.0	-	-	-	-	9.4	10.8	12.3	13.7	
RH	[m]		10.0	11.5	12.9	14.3	8.9	10.2	11.5	12.9	7.8	9.0	10.2	11.4															
L0.35	[m]	84°	8.2	9.7	11.1	12.5	7.1	8.4	9.7	11.1	6.0	7.2	8.4	9.6	3.8	4.7	5.7	6.7	1.6	2.3	3.0	3.8	8.2	9.6	11.0	12.3			
RH	[m]		7.2	8.2	9.2	10.2	6.7	7.7	8.6	9.6	6.3	7.2	8.1	9.0															
L0.35	[m]	110°	5.4	6.4	7.4	8.4	4.9	5.9	6.8	7.8	4.5	5.4	6.3	7.2	3.6	4.4	5.2	6.0	2.7	3.4	4.1	4.8	7.7	9.0	10.4	11.7			
RH	[m]		5.9	6.7	7.5	8.3	5.7	6.5	7.3	8.0	5.5	6.3	7.0	7.8															
L0.35	[m]	140°	4.1	4.9	5.7	6.5	3.9	4.7	5.5	6.2	3.7	4.5	5.2	6.0	3.4	4.1	4.8	5.5	3.0	3.7	4.3	5.0	13.2	15.6	18.1	20.6			

Grille:		900 x 200		Area of air volume rate: = 1215 to 1944 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$								
V	[m ³ /h]	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		10.4	12.0	13.5	14.9	9.2	10.6	12.0	13.3	8.0	9.3	10.5	11.7												
L0.35	[m]	84°	8.6	10.2	11.7	13.1	7.4	8.8	10.2	11.5	6.2	7.5	8.7	9.9	3.8	4.8	5.7	6.7	1.4	2.1	2.8	3.5	8.7	10.2	11.6	12.9
RH	[m]		7.4	8.5	9.5	10.6	7.0	7.9	8.9	9.9	6.5	7.4	8.3	9.3												
L0.35	[m]	110°	5.6	6.7	7.7	8.8	5.2	6.1	7.1	8.1	4.7	5.6	6.5	7.5	3.7	4.5	5.3	6.2	2.7	3.4	4.1	4.8	8.1	9.5	10.9	12.4
RH	[m]		6.1	6.9	7.7	8.6	5.9	6.7	7.5	8.3	5.7	6.5	7.2	8.0												
L0.35	[m]	140°	4.3	5.1	5.9	6.8	4.1	4.9	5.7	6.5	3.9	4.7	5.4	6.2	3.5	4.2	4.9	5.7	3.1	3.7	4.4	5.1	13.9	16.3	18.8	21.6

Grille:		600 x 250		Area of air volume rate: = 1013 à 1620 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$								
V	[m ³ /h]	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	1013	1215	1418	1620	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RH	[m]		11.1	12.7	14.3	15.9	9.8	11.3	12.8	14.2	8.5	9.8	11.2	12.5												
L0.35	[m]	84°	9.3	10.9	12.5	14.1	8.0	9.5	11.0	12.4	6.7	8.0	9.4	10.7	4.1	5.2	6.2	7.3	1.6	2.3	3.1	3.9	9.2	10.7	12.2	13.7
RH	[m]		7.9	9.0	10.1	11.2	7.4	8.4	9.5	10.5	6.8	7.8	8.8	9.8												
L0.35	[m]	110°	6.1	7.2	8.3	9.4	5.6	6.6	7.7	8.7	5.0	6.0	7.0	8.0	4.0	4.9	5.8	6.7	2.9	3.7	4.5	5.3	8.6	10.0	11.5	13.0
RH	[m]		6.4	7.3	8.2	9.1	6.2	7.1	7.9	8.8	6.0	6.8	7.7	8.5												
L0.35	[m]	140°	4.6	5.5	6.4	7.3	4.4	5.3	6.1	7.0	4.2	5.0	5.9	6.7	3.7	4.5	5.3	6.1	3.3	4.0	4.8	5.5	14.6	17.4	20.2	23.0

Technical Data

Grille:		750 x 250		Area of air volume rate: = 1266 to 2025 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$								
V	[m ³ /h]	1266	1519	1772	2025	1266	1519	1772	2025	1266	1519	1772	2025	1266	1519	1772	2025	1266	1519	1772	2025	1266	1519	1772	2025	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]		11.9	13.7		10.4	12.0	13.6		8.9	10.3	11.8	13.2													
L0.35	[m]	84°	10.1	11.9	-	-	8.6	10.2	11.8	-	7.1	8.5	10.0	11.4	4.1	5.2	6.3	7.4	1.1	1.8	2.6	3.4	10.0	11.7	13.4	15.0
RH	[m]		8.4	9.6	10.8	12.0	7.8	8.9	10.0	11.2	7.1	8.2	9.3	10.3												
L0.35	[m]	110°	6.6	7.8	9.0	10.2	6.0	7.1	8.2	9.4	5.3	6.4	7.5	8.5	4.1	5.0	6.0	6.9	2.9	3.7	4.5	5.3	9.3	10.9	12.5	14.2
RH	[m]		6.8	7.7	8.7	9.6	6.5	7.4	8.3	9.3	6.3	7.1	8.0	8.9												
L0.35	[m]	140°	5.0	5.9	6.9	7.8	4.7	5.6	6.5	7.5	4.5	5.3	6.2	7.1	3.9	4.8	5.6	6.4	3.4	4.2	5.0	5.8	16.0	18.7	21.9	24.6

Grille:		900 x 250		Area of air volume rate: = 1519 to 2430 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10 \text{ K}$				$\Delta t = -5 \text{ K}$				$\Delta t = 0 \text{ K}$				$\Delta t = +10 \text{ K}$				$\Delta t = +20 \text{ K}$								
V	[m ³ /h]	1519	1823	2126	2430	1519	1823	2126	2430	1519	1823	2126	2430	1519	1823	2126	2430	1519	1823	2126	2430	1519	1823	2126	2430	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]		12.6	14.5		10.9	12.6	14.3		9.2	10.7	12.2	13.7													
L0.35	[m]	84°	10.8	12.7	-	-	9.1	10.8	12.5	-	7.4	8.9	10.4	11.9	4.1	5.2	6.3	7.4	-	1.4	2.2	3.0	10.8	12.6	14.3	16.0
RH	[m]		8.7	10.0	11.3	12.5	8.1	9.3	10.4	11.6	7.4	8.5	9.6	10.7												
L0.35	[m]	110°	6.9	8.2	9.5	10.7	6.3	7.5	8.6	9.8	5.6	6.7	7.8	8.9	4.2	5.2	6.1	7.1	2.8	3.6	4.4	5.3	9.8	11.6	13.3	14.9
RH	[m]		7.0	8.0	9.0	10.0	6.7	7.7	8.7	9.6	6.4	7.4	8.3	9.2												
L0.35	[m]	140°	5.2	6.2	7.2	8.2	4.9	5.9	6.9	7.8	4.6	5.6	6.5	7.4	4.1	4.9	5.8	6.7	3.5	4.3	5.1	5.9	16.7	19.8	22.9	26.0

Grille:		600 x 300		Area of air volume rate: = 1215 to 1944 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10\text{ K}$				$\Delta t = -5\text{ K}$				$\Delta t = 0\text{ K}$				$\Delta t = +10\text{ K}$				$\Delta t = +20\text{ K}$								
V	[m ³ /h]	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	1215	1458	1701	1944	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]		12.6	14.5																						
L0.35	[m]	84°	10.8	12.7	-	-	9.2	10.9	12.6	-	7.6	9.1	10.6	12.2	4.4	5.6	6.7	7.9	1.2	2.0	2.8	3.7	10.6	12.4	14.1	15.9
RH	[m]		8.8	10.1	11.4	12.6	8.1	9.4	10.6	11.8	7.5	8.6	9.8	10.9												
L0.35	[m]	110°	7.0	8.3	9.6	10.8	6.3	7.6	8.8	10.0	5.7	6.8	8.0	9.1	4.4	5.4	6.4	7.4	3.1	3.9	4.8	5.7	9.8	11.5	13.3	14.9
RH	[m]		7.1	8.1	9.1	10.1	6.8	7.8	8.8	9.8	6.5	7.5	8.4	9.4												
L0.35	[m]	140°	5.3	6.3	7.3	8.3	5.0	6.0	7.0	8.0	4.7	5.7	6.6	7.6	4.2	5.1	6.0	6.9	3.7	4.5	5.3	6.1	16.8	19.9	23.0	26.1

Grille:		900 x 300		Area of air volume rate: = 1823 to 2916 m ³ /h																						
		Cooling case								Isotherme				Heating case								Distance of grilles D				
		$\Delta t = -10\text{ K}$				$\Delta t = -5\text{ K}$				$\Delta t = 0\text{ K}$				$\Delta t = +10\text{ K}$				$\Delta t = +20\text{ K}$								
V	[m ³ /h]	1823	2187	2552	2916	1823	2187	2552	2916	1823	2187	2552	2916	1823	2187	2552	2916	1823	2187	2552	2916	1823	2187	2552	2916	
v _{eff}	[m/s]	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	2.5	3.0	3.5	4.0	
RH	[m]																									
L0.35	[m]	0°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	geg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]																									
L0.35	[m]	44°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
RH	[m]		14.7																							
L0.35	[m]	84°	12.9	-	-	-	10.7	12.7	-	-	8.5	10.3	12.0	-	4.2	5.4	6.7	7.9	-	-	1.4	2.2	12.7	14.8	16.9	18.9
RH	[m]		10.0	11.5	12.9	14.4	9.1	10.5	11.9	13.2	8.2	9.5	10.8	12.1												
L0.35	[m]	110°	8.2	9.7	11.1	12.6	7.3	8.7	10.1	11.4	6.4	7.7	9.0	10.3	4.6	5.7	6.8	7.9	2.9	3.7	4.6	5.6	11.6	13.6	15.5	17.5
RH	[m]		7.9	9.0	10.2	11.3	7.5	8.6	9.7	10.8	7.1	8.2	9.3	10.3												
L0.35	[m]	140°	6.1	7.2	8.4	9.5	5.7	6.8	7.9	9.0	5.3	6.4	7.5	8.5	4.6	5.6	6.6	7.6	3.9	4.8	5.7	6.6	19.5	22.9	26.6	30.0

Arrangement of the grilles

Selection of the duct and grille types

Rectangular ducts with: DG / DGL 1 - 17

Circular ducts with: DGR1 - DGRA1 / DGRA1 - DGRA17

dependent on the diameter of the duct

Arrangement of the grilles in the duct

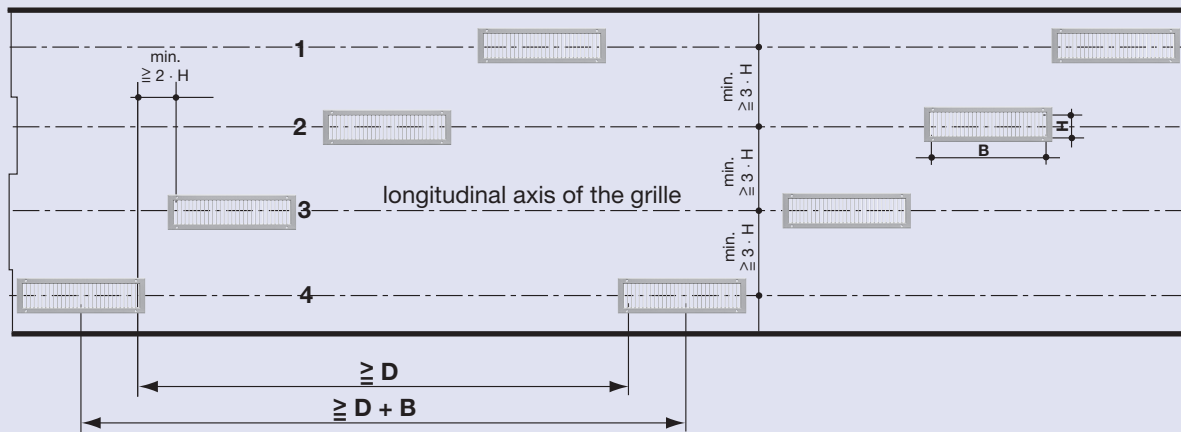
An offset arrangement of grilles is necessary because of the large stream width caused by the divergent blade position.

Arrangement in a rectangular duct (with DG or DGL)

Possible blade settings:

H = 50 bis 250 mm; 84°, 110°, 140° divergent

View of the duct from below



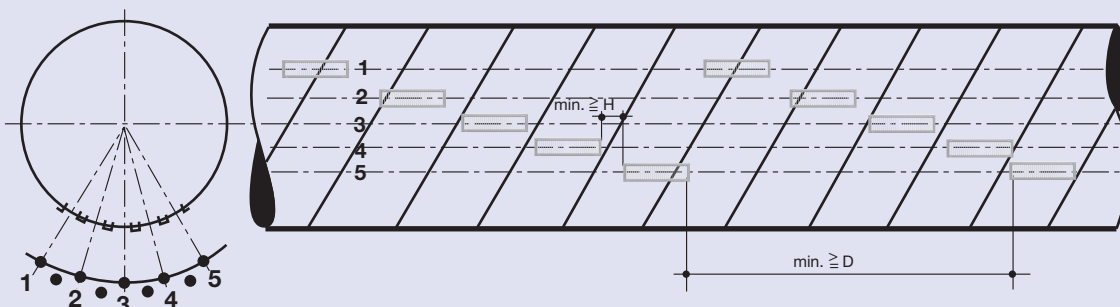
Arrangement in circular ducts (with DGR / DGRA)

Possible blade settings:

H = 50 mm, 84°, 110°, 140° divergent possible

H ≥ 100 mm, 84°, 110° divergent possible

View of the duct from below



- Angle depending of duct diameter and nominal grille size: ca. 15° bis 30°

Installation of the grilles

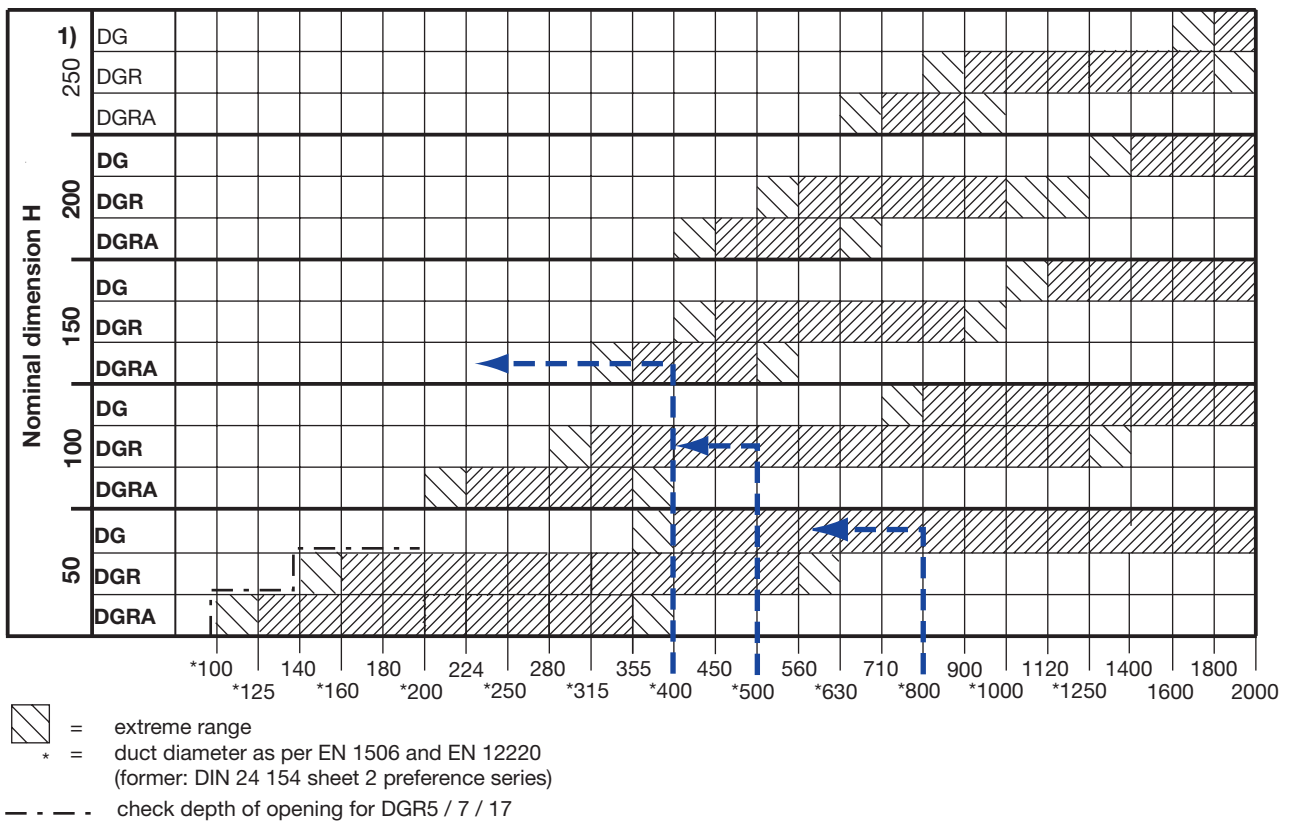
Installation of the grilles

- DG : with screws
- DGL : without screws
- DGR : with or without screws

See the brochures for further details: L-02-1-01e, L-02-1-09e, L-02-2-01e

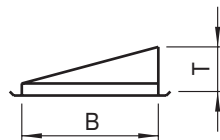
Application areas of the DGR

The following table shows the pipe diameter ranges for which a particular grille height H can be used.



1) Grille nominal height H = 250 it **not** a size that is held on stock

Installation depth T for DGR5 / 7 / 17



B = Nominal width		200	300	400	500	600	750	900 ²⁾	mm
T	DGR5	90	100	110	115	125	145	170	mm
	DGR7 / 17	max.155 (100% open)							

2) Grille nominal width B = 900 it **not** a size that is held on stock

Arrangement in the room · Noise information

Arrangement of the ducts in the room

The ducts are to be distributed evenly over the room in the plan view and on the ceiling wherever possible.



Noise information for TROX HESCO diffusion grilles

Supply air: DG1 see diagram L-02-5-01e, page 19 and the following
DG6 see diagram L-02-5-01e, page 19 and the following

Exhaust air: DG8 see diagram L-02-5-01e, page 19 and the following

Selection diagrams for horizontally discharging TROX HESCO diffusion grilles

See „Diffusion grille type DG..., Dimensioning“, L-02-5-01e