

DX swirl diffuser

Air deflection blades with progressively twisted profile
Optimised versions for all applications
Minimum installation heights using special plenum boxes

DX swirl diffuser

Description, type overview

DX swirl diffuser with radially aligned air deflection blades. The novel **blades with progressively twisted profile** allow for **high volume flow rates with a low sound power level**. The many variations allow the airflow to be optimally tailored to a wide range of uses.

DX swirl diffuser for constant and variable supply air volume flow rates. With angular and circular hole patterns and various numbers of blades, the way the swirl diffuser is used can be optimally suited to the application. Air is radially distributed via centrally slotted, square or circular front plates with repositionable air deflection blades. Their arrangement angles are progressively twisted to optimise the air throw and reduce the sound power level.

DX swirl diffusers ensure high induction with the room air immediately at the diffuser. In this way, the velocity of the outflowing supply air and the temperature differentials are very quickly reduced. This also applies when heating or cooling a room with a temperature difference of -12 K between the room air and supply air. If the minimum volume flow rates are maintained in the area of application, there is never a risk of airflow coming off the ceiling when cooling a room. Air is deflected into the occupied zone by room walls and counterflows. Optimum air distribution is possible in rooms with heights of approximately 2.5 to 4 m, and is best achieved with plenum boxes installed flush in ceilings. The easily repositionable air deflection blades in the installed state allow the airflow to be tailored to individual room geometries.

DX swirl diffusers are made of galvanised sheet steel, and the black or white air deflection blades of plastic. Burning behaviour classified as HB under UL94. Usable as air diffuser in suspended ceilings with fire resistance period in conjunction with fire dampers FKU30 and FKU90. The front plates retain a resistant sintered polyester surface at high temperature, which is extremely colour-fast and anti-static. With powdered coating in colour RAL 9010 (white) smooth glossy with 80 to 90% gloss level or in another RAL colour.

DX exhaust air diffuser is a swirl diffuser which does not have air deflection blades and is only suitable for exhaust air to allow for larger free cross-sections and higher volume flow rates at the same sound power levels. Design, surfaces and dimensions correspond to the swirl diffuser for supply air.

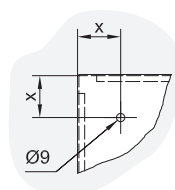
The **plenum boxes** made of galvanised sheet steel are optimised for swirl diffusers and low heights and are also available with powder coating. One or two lateral connecting pieces or one for connection from above are possible as standard features, as well as dampers and special air deflector plates for optimum air distribution with low flow noises, in particular for supply air. A volume flow can be adjusted without dismantling the swirl diffuser or the exhaust air diffuser. With holes for suspensions and with concealed central attachment.

For closed ceilings systems, grid ceilings and for freely suspended installation.

Central fastening¹⁾ with concealed screws M8x25:

¹⁾ The nominal variables 800 and 825 are additionally given corner holes

DXQ 800 x = 45.5
DXQ 825 x = 58



Colour of swirl diffuser / exhaust air diffuser

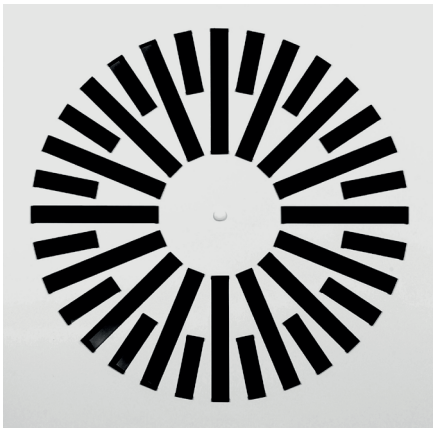
RAL 9010	Special colour RAL.....	
White RAL 9010	Black RAL 9017	Special colour RAL

Type overview

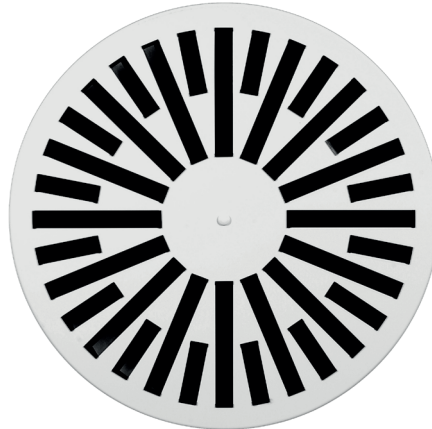
Swirl diffuser (or exhaust air diffuser)	DXQ0 / DXQ1			DXR0	
	lateral	two lateral	top	lateral	top
<ul style="list-style-type: none"> with blades (for supply air, exhaust air is possible) <ul style="list-style-type: none"> black matt white, similar to RAL 9010 without blades (only for exhaust air) 					
and plenum box with connecting piece:					
• without damper, without air deflector plate	K1	K2	K3	R1	R3
• with damper	K1-D	K2-D	K3-D	R1-D	R3-D
• with air deflector plate	K1-L	K2-L	K3-L	R1-L	R3-L
• with damper, with air deflector plate	K1-DL	K2-DL	K3-DL	R1-DL	R3-DL

DX swirl diffuser

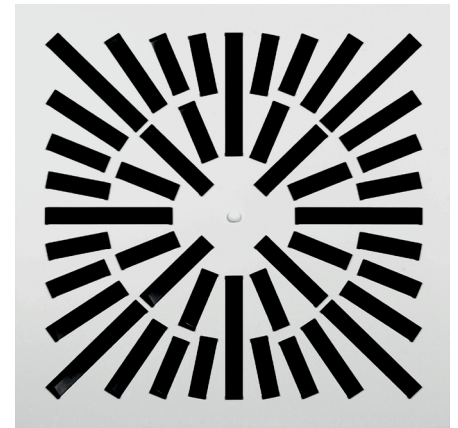
Data sheet, front plates



Square front plate DXQ0 625



Circular front plate DXR0 600



Square front plate DXQ1 625

Nominal size	DXQ0 square				DXR0 circular				Application with		
	LB	LA	∠A	∠F	LB	LA	∅A	∅F	supply air ¹⁾		exhaust air
									A _{free} [m²]	from [m³/h]	A _{free} [m²]
325	325	8	323	260	325	8	325	285	0.009	80	0.017
400	400	16	398	337	400	16	400	360	0.024	100	0.041
500	500	20	498	437	500	20	500	460	0.031	210	0.052
500	500	24	498	437	500	24	500	460	0.037	270	0.062
600	325	8	595	260	-	-	-	-	0.009	80	0.017
600	400	16	595	337	-	-	-	-	0.024	100	0.041
600	500	20	595	437	-	-	-	-	0.031	210	0.052
600	500	24	595	437	-	-	-	-	0.037	270	0.062
600	600	24	595	537	600	24	600	560	0.047	135	0.079
600	600	28	595	537	600	28	600	560	0.055	240	0.092
600	600	32	595	537	600	32	600	560	0.063	445	0.105
625	325	8	623	260	-	-	-	-	0.009	80	0.017
625	400	16	623	337	-	-	-	-	0.024	100	0.041
625	500	20	623	437	-	-	-	-	0.031	210	0.052
625	500	24	623	437	-	-	-	-	0.037	270	0.062
625	600	24	623	537	-	-	-	-	0.047	135	0.079
625	600	28	623	537	-	-	-	-	0.055	240	0.092
625	600	32	623	537	-	-	-	-	0.063	445	0.105
800	800	56	798	737	800	56	800	760	0.097	590	0.165
800	800	64	798	737	800	64	800	760	0.113	765	0.192
825	800	56	823	737	-	-	-	-	0.097	590	0.165
825	800	64	823	737	-	-	-	-	0.113	765	0.192

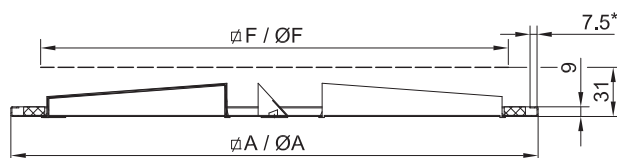
¹⁾ ⇒ see page 15

LB: Hole pattern (plenum box size)

LA: Number of blades or slots

A: Front plate dimension

F: clear ceiling cut-out dimension



*) surrounding edging only with DXQ0 and DXQ1

All dimensions in [mm]

Nominal size	DXQ1 square				Application with		
	LB	LA	∠A	∠F	supply air ¹⁾		exhaust air
					A _{free} [m²]	from [m³/h]	A _{free} [m²]
325	325	8	323	260	0.012	25	0.021
400	400	16	398	337	0.028	90	0.047
500	500	28	498	437	0.048	115	0.080
600	325	8	595	260	0.012	25	0.021
600	400	16	595	337	0.028	90	0.047
600	500	28	595	437	0.048	115	0.080
600	600	44	595	537	0.072	155	0.123
625	325	8	623	260	0.012	25	0.021
625	400	16	623	337	0.028	90	0.047
625	500	28	623	437	0.048	115	0.080
625	600	44	623	537	0.072	155	0.123
800	800	84	798	737	0.124	315	0.212
825	800	84	823	737	0.124	315	0.212

- The nominal values correspond to the front plates.
- The hole patterns correspond to the plenum box sizes. They determine the free cross-sections A_{free} of swirl diffusers or exhaust air diffusers.

Special designs

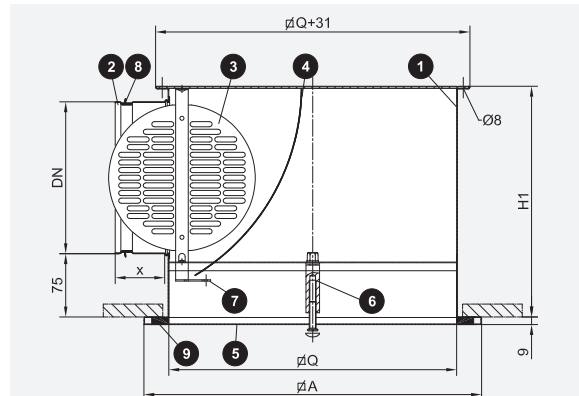
- Coating of front plates with polyester in other colours. Colours are available from the RAL Classic colour collection as standard. Customised colours - besides those available at the factory - can be requested!
- Coating of plenum boxes with polyester, black inside and outside, or outside in colours²⁾ as before.

²⁾ for colours ⇒ see page 26

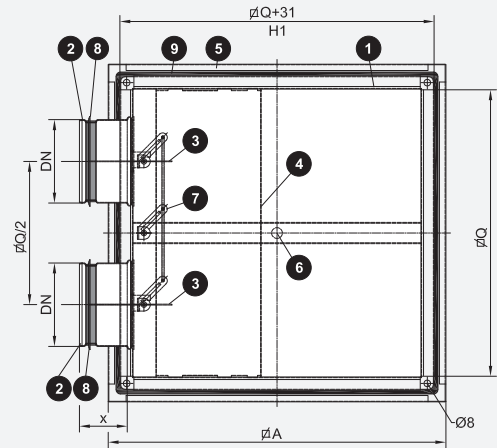
DX swirl diffuser

Plenum boxes for closed ceilings systems, grid ceilings and for freely suspended installation

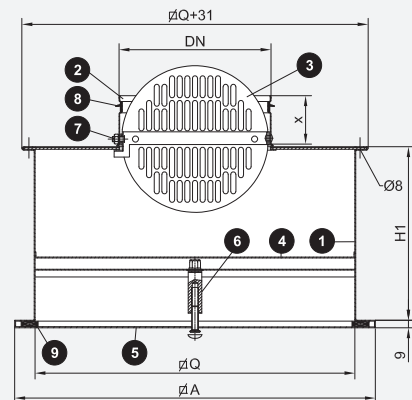
K1 - with lateral connecting piece



K2 - with two lateral connecting pieces for large volume flow rates at low plenum box height H1



K3 - with top connecting piece



Plenum box heights H1 [mm]

Standard connecting pieces and heights of plenum boxes K1 are in bold.

Front plate dimension $\nabla A \Rightarrow$ see page 3
Parts list \Rightarrow see page 5

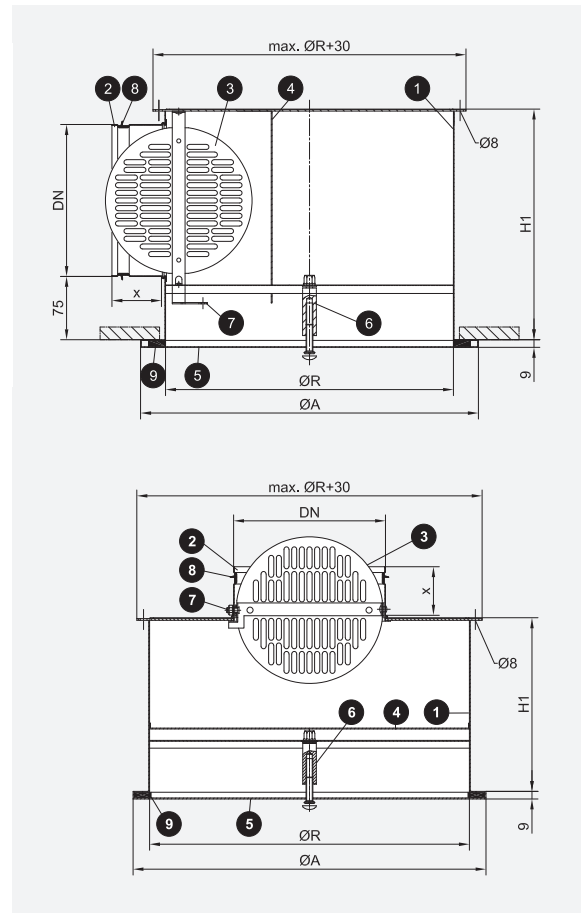
Plenum box size Hole pattern	∇Q	Plenum box K1 with connecting piece DN											K2 with DN							K3 with DN					
		100	125	150	160	180	200	224	250	280	300	315	355	100	125	150	160	180	200	224	250	160	200	250	315
325	260	190	215	240	250	270	290	-	-	-	-	-	-	190	-	-	-	-	-	-	-	190	-	-	
400	337	-	215	240	250	270	290	314	-	-	-	-	-	190	215	-	-	-	-	-	-	-	190	-	
500	437	-	-	240	250	270	290	314	340	370	-	-	-	-	215	240	250	270	-	-	-	-	190	-	
600 ¹⁾	537	-	-	240	250	270	290	314	340	370	390	405	-	-	215	240	250	270	290	314	-	-	-	200-	
800 ¹⁾	737	-	-	-	-	-	290	314	340	370	390	405	445	-	-	240	250	270	290	314	340	-	-	-287	
Connecting piece x		40	40	40	40	40	40	60	60	60	60	60	60	40	40	40	40	40	40	60	60	40	40	60	60

¹⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Plenum boxes for closed ceilings systems, grid ceilings and for freely suspended installation

R1 - with lateral connecting piece



R3 - with top connecting piece



Front plate dimension Ø A ⇒ see page 3

Plenum box heights H1 [mm]

Standard connecting pieces and heights of plenum boxes R1 are in bold.

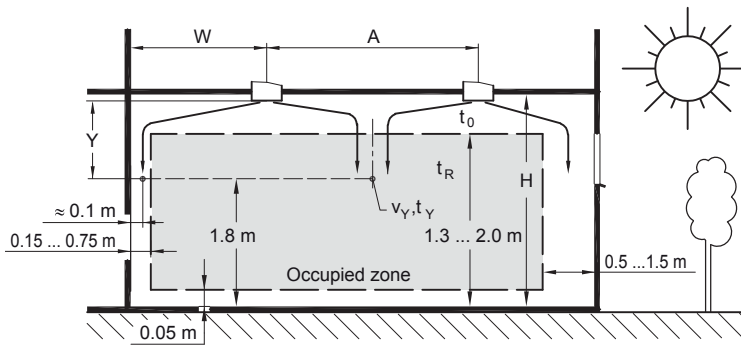
Plenum box size Hole pattern	Ø R	Plenum box R1 with connecting piece DN												R3 with DN				
		100	125	150	160	180	200	224	250	280	300	315	355	160	200	250	315	
325	285	190	215	240	250	270	290	-	-	-	-	-	-	190	-	--		
400	360	-	215	240	250	270	290	314	-	-	-	-	-	-	190	--		
500	460	-	-	240	250	270	290	314	340	370	-	-	-	-	190	--		
600	560	-	-	240	250	270	290	314	340	370	390	405	-	-	-	200-		
800	760	-	-	-	-	-	290	314	340	370	390	405	445	-	-	-287		
Connecting piece x		40	40	40	40	40	40	60	60	60	60	60	60	40	40	60	60	

Parts list

- | | | |
|--------------------|--|-------------------------------|
| 1 Plenum box | 4 Air deflector plate (option) | 7 Adjustment device of damper |
| 2 Connecting piece | 5 Swirl diffuser or exhaust air diffuser | 8 Lip seal (optional) |
| 3 Damper (option) | 6 Central fastening | 9 Seal |

DX swirl diffuser

Dimensioning of room airflow



Occupied zone according to EN 13779

The occupied zone is defined in EN 13779 as a spatial element. The comfort criteria it lays out must be met.

In the conventional area of application, the height is 1.30 m to 2.00 m. The permissible flow velocities v_Y should be set as standard at a height of 1.80 m. Higher velocities are permissible outside the occupied zone, at distances from 0.15 m to 0.75 m from interior and exterior walls and from 0.5 m to 1.5 m from exterior walls which have windows or doors.

Dimensioning of DX swirl diffusers

The flow velocity v_Y is determined according to the hole pattern by the free swirl diffuser cross-section A_{free} , by the volume flow V , by the room height H , by the orthogonal distances A and B of the swirl diffusers with respect to each other and their wall distance W . In addition to the absolute distances A and B , the ratio of A to B is also important. Swirl diffusers in extremely rectangular arrangements with $A \gg B$ or $B \gg A$, which can also be single-row arrangements, produce significantly different flow velocities v_Y compared to square and slightly rectangular arrangements.

The following applies to the occupied zone:

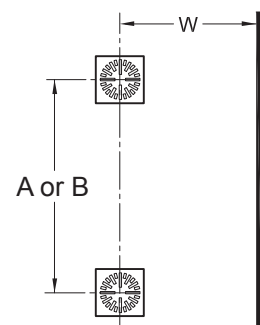
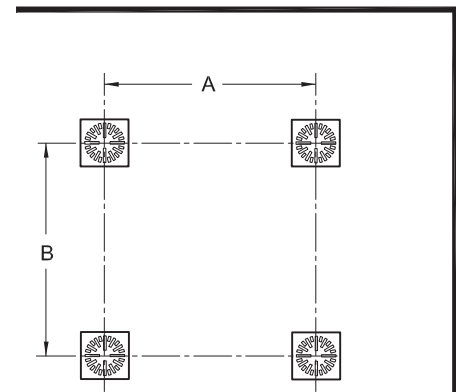
DX swirl diffusers achieve

- lower flow velocities v_Y if
 - the distances A and B are greater than 2.35 m,
 - the distances A and B are very different and a distance much shorter than 2.35 m, or
- higher flow velocities v_Y if
 - the distances A and B are equal, but less than 2.35 m,
 - a distance, A or B , is equal to 2.35 m.

The flow velocities v_Y for DX swirl diffusers are particularly lower if the wall distances W are greater in the case of short distances A and B .

The nomograms show these relationships and the effect of adjacent walls.

The room airflow can be optimised using various arrangements of DX swirl diffusers and a corresponding choice of size. In this way, it is possible to use fewer swirl diffusers. However, effective room airflow and large enough flow velocities for effective airflow in the room should also always be ensured.



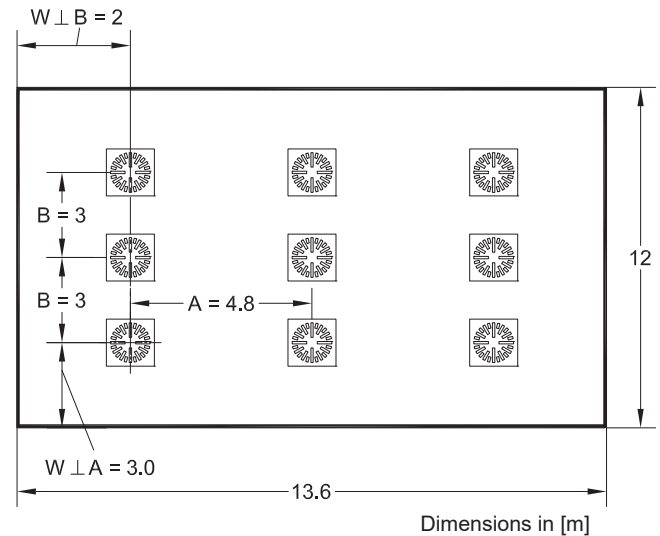
DX swirl diffuser

Dimensioning example

Rectangular arrangement

Specified:

Room dimension 1	13.6 m
Room dimension 2	12.0 m
Room height	H = 3.00 m
Ceiling spacing	Y = 1.20 m
Air change	11.4 h ⁻¹
Room volume	490 m ³
Total volume flow	V _{tot} = 5580 m ³ /h
Room temperature	t _R = 22 °C
Supply air temperature	t ₀ = 18 °C



Plenum box with standard connection piece

DXQ0 - 625 - 600 - ML - 32 - K1 - 250 - DL¹⁾	9 units
Volume flow per diffuser	V = 620 m ³ /h
Inflow cross-section of connecting pieces	A _A = 0.049 m ²
Flow velocity in A _A	v _A = 3.5 m/s
Δp _t , damper OPEN	Δp _t = 17 Pa
L _{WA} , damper OPEN	L _{WA} = 32 dB(A)
⇒ see nomogram page 10	
Δp _t , damper CLOSED	17 Pa · 3.2 ²⁾ = 54 Pa
L _{WA} , damper CLOSED	32 dB(A) + 8.6 ²⁾ = 41 dB(A)

Octave sound power level L_{W-Okt}, damper OPEN

f	[Hz]	63	125	250	500	1000	2000	4000	8000
L _{WA}	[dB(A)]	32	32	32	32	32	32	32	32
ΔL _{3.5 [m/s]}	[dB]	+7	+7	+3	-4	-5	-10	-19	-23
L _{W-Okt}	[dB]	39	39	35	28	27	22	<20	<20

⇒ see nomogram page 14

Plenum box with other connecting piece size

DXQ0 - 625 - 600 - ML - 32 - K1 - 224 - DL¹⁾	9 units
Volume flow per diffuser	V = 620 m ³ /h
Inflow cross-section of connecting pieces	A _A = 0.039 m ²
Flow velocity in A _A	v _A = 4.4 m/s
Δp _t , damper OPEN	17 Pa · 1.3 ³⁾ = 22 Pa
L _{WA} , damper OPEN	32 dB(A) + 2.9 ³⁾ = 35 dB(A)
Δp _t , damper CLOSED	17 Pa · 1.3 ³⁾ · 3.6 ²⁾ = 80 Pa
L _{WA} , damper CLOSED	32 dB(A) + 2.9 ³⁾ + 10.5 ²⁾ = 45 dB(A)

Octave sound power level L_{W-Okt}, damper OPEN

f	[Hz]	63	125	250	500	1000	2000	4000	8000
L _{WA}	[dB(A)]	35	35	35	35	35	35	35	35
ΔL _{4.4 [m/s]}	[dB]	+6	+6	+2	-4	-5	-10	-18	-22
L _{W-Okt}	[dB]	41	41	37	31	30	25	<20	<20

⇒ see nomogram page 14

¹⁾ Order information ⇒ see page 2 and 26

²⁾ Correction values ⇒ see page 20

³⁾ Correction values ⇒ see page 17

Room airflow

Distance A	A = 4.80 m
Distance B	B = 3.00 m
Distance W, at right angles to A	W = 3.00 m
Distance W, at right angles to B	W = 2.00 m
Flow velocity in occupied zone	v _y = 0.15 m/s
⇒ see nomogram page 8	
Flow velocity at the wall, at right angles to A	v _y = 0.19 m/s
⇒ see nomogram page 9	
Flow velocity at the wall, at right angles to B	v _y = 0.25 m/s
⇒ see nomogram page 9	

Temperature ratio, induction in occupied zone

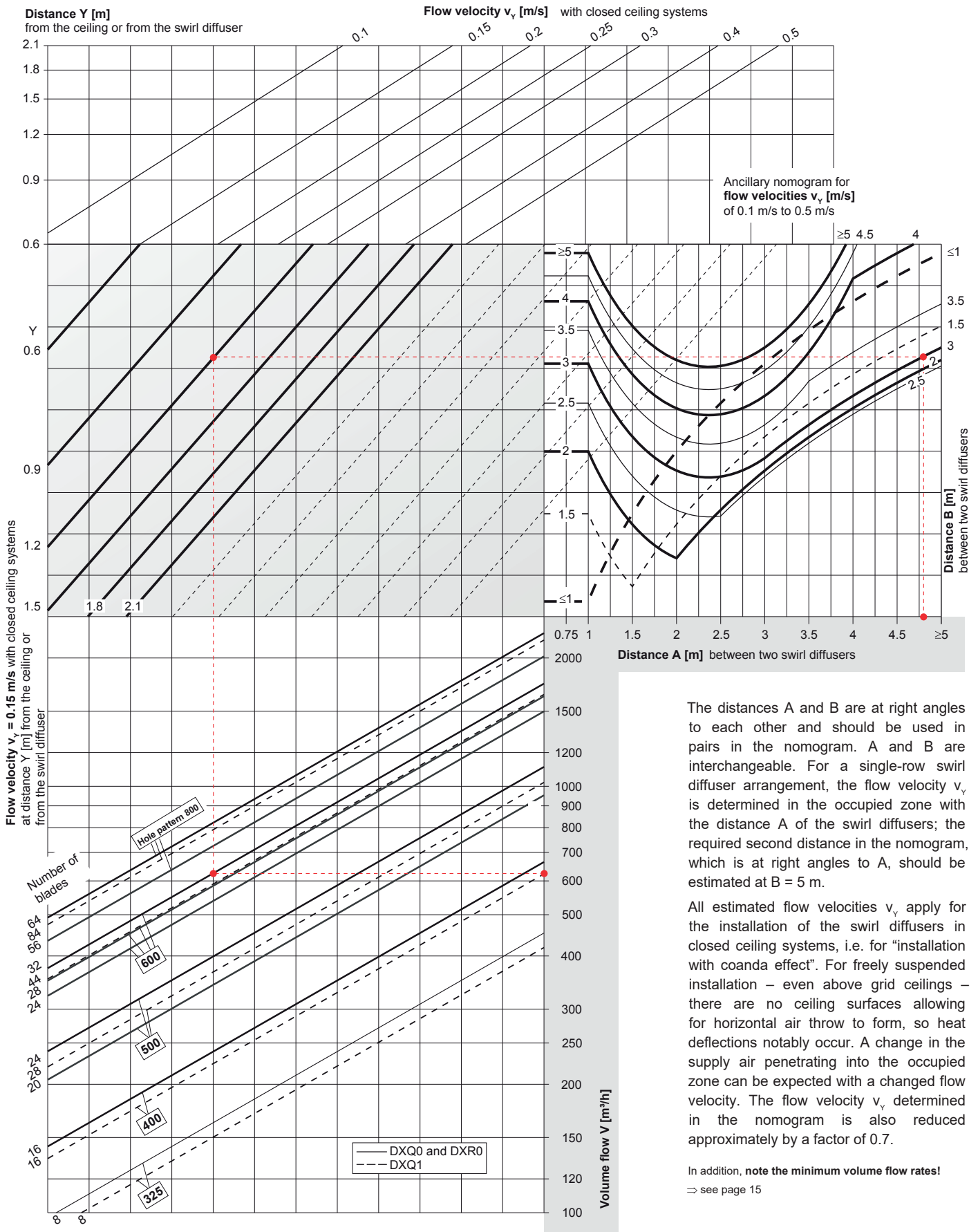
Temperature ratio	Δt/Δt ₀ = 0.047
Induction	i = 20

⇒ see nomogram page 16

Nomenclature ⇒ see page 16

DX swirl diffuser

Room airflow (jets towards each other)



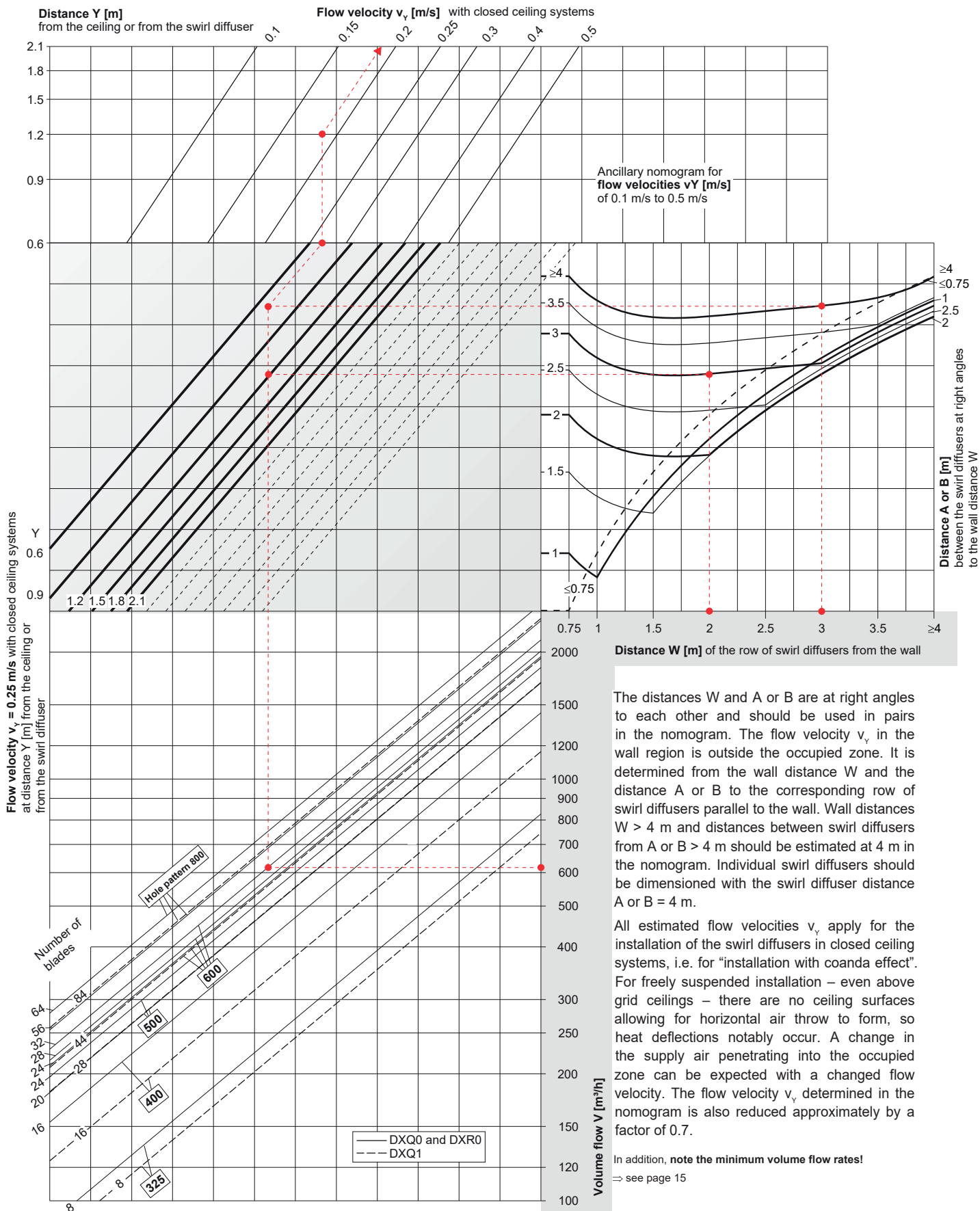
The distances A and B are at right angles to each other and should be used in pairs in the nomogram. A and B are interchangeable. For a single-row swirl diffuser arrangement, the flow velocity v_y is determined in the occupied zone with the distance A of the swirl diffusers; the required second distance in the nomogram, which is at right angles to A, should be estimated at B = 5 m.

All estimated flow velocities v_y apply for the installation of the swirl diffusers in closed ceiling systems, i.e. for "installation with coanda effect". For freely suspended installation – even above grid ceilings – there are no ceiling surfaces allowing for horizontal air throw to form, so heat deflections notably occur. A change in the supply air penetrating into the occupied zone can be expected with a changed flow velocity. The flow velocity v_y determined in the nomogram is also reduced approximately by a factor of 0.7.

In addition, note the minimum volume flow rates!
⇒ see page 15

DX swirl diffuser

Room airflow (jets towards a wall)

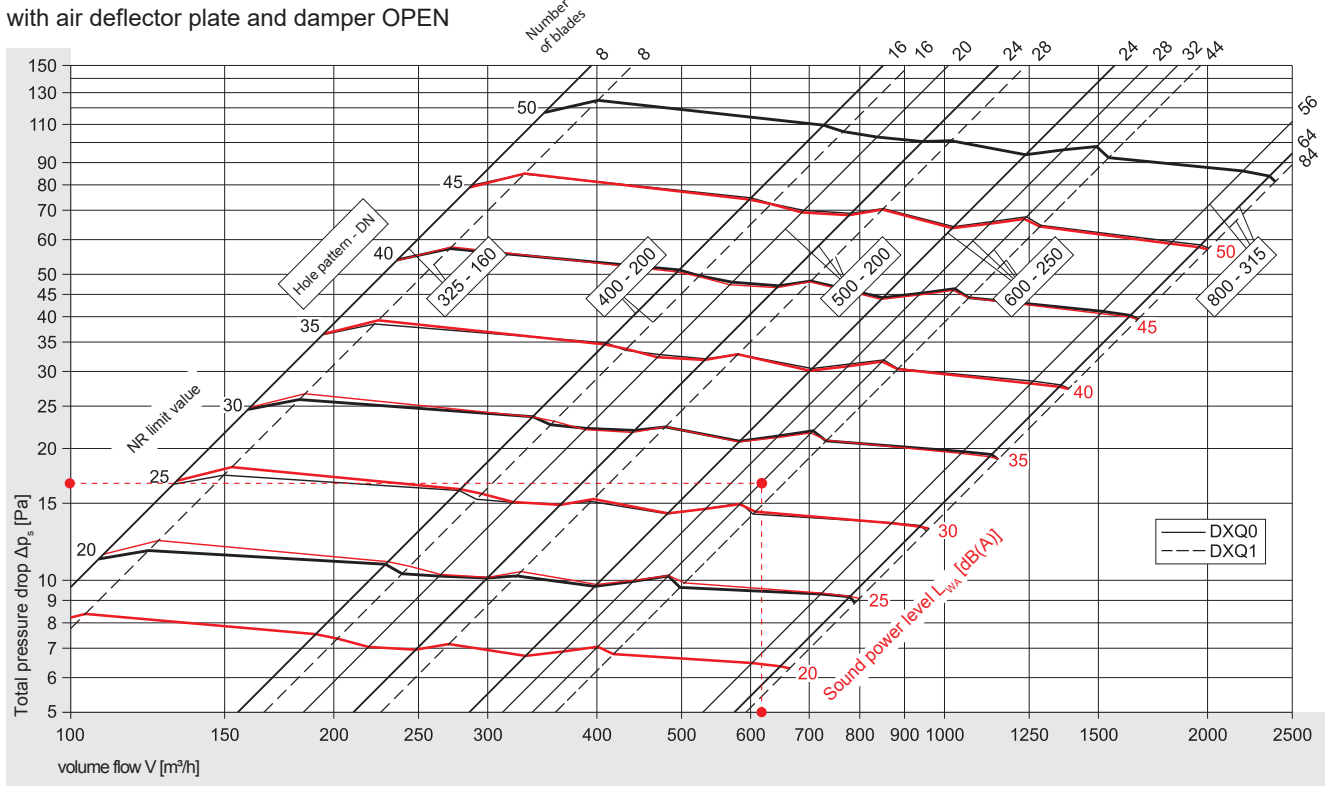


DX swirl diffuser

Pressure drop, sound power level, NR (noise rating)

Supply air: DXQ with plenum box K1-DL

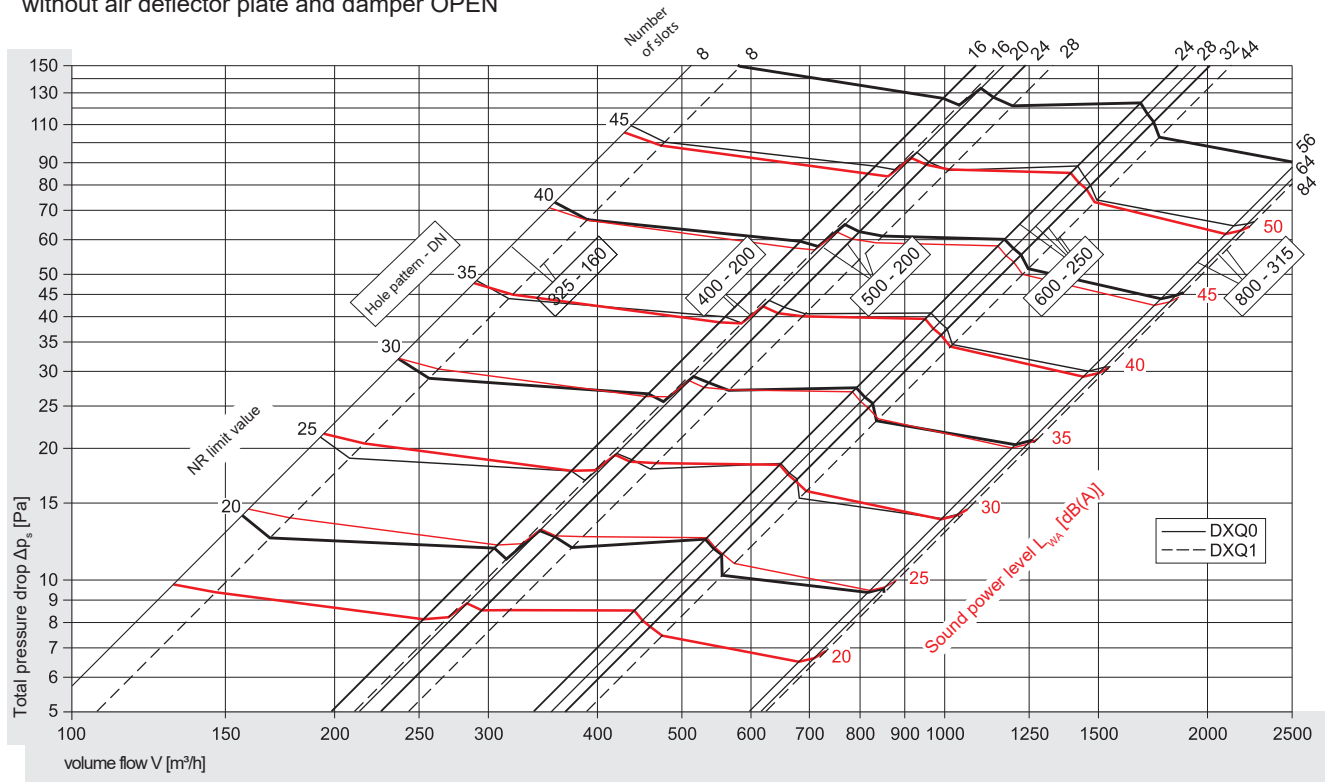
with air deflector plate and damper OPEN



In addition, note the minimum volume flow rates!
⇒ see page 15

Exhaust air: DXQ with plenum box K1-D

without air deflector plate and damper OPEN



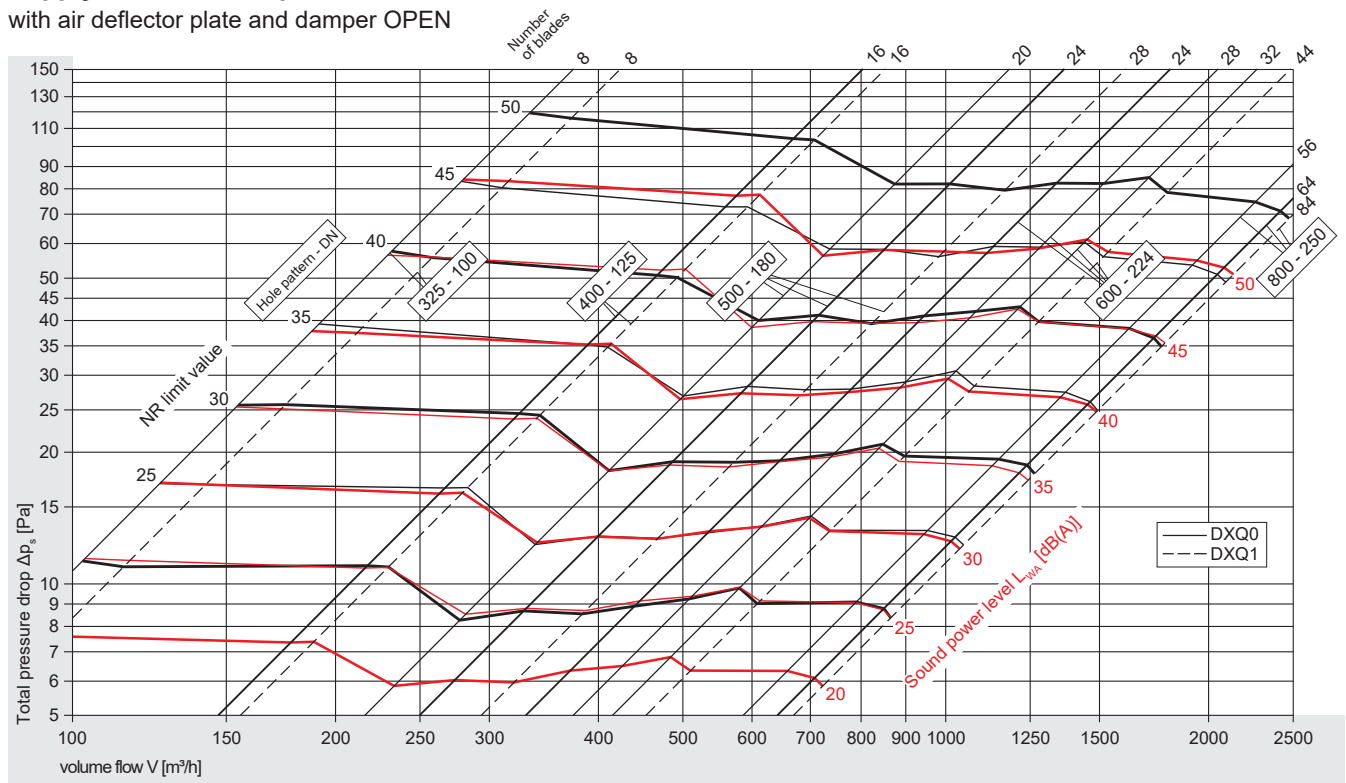
Corrections for other connecting piece sizes and for damper CLOSED ⇒ see pages 17 and 20.
Relative sound power level ΔL for plenum boxes K1 ⇒ see page 14 and WILDEBOER - dimensioning software.

DX swirl diffuser

Pressure drop, sound power level, NR (noise rating)

Supply air: DXQ with plenum box K2-DL

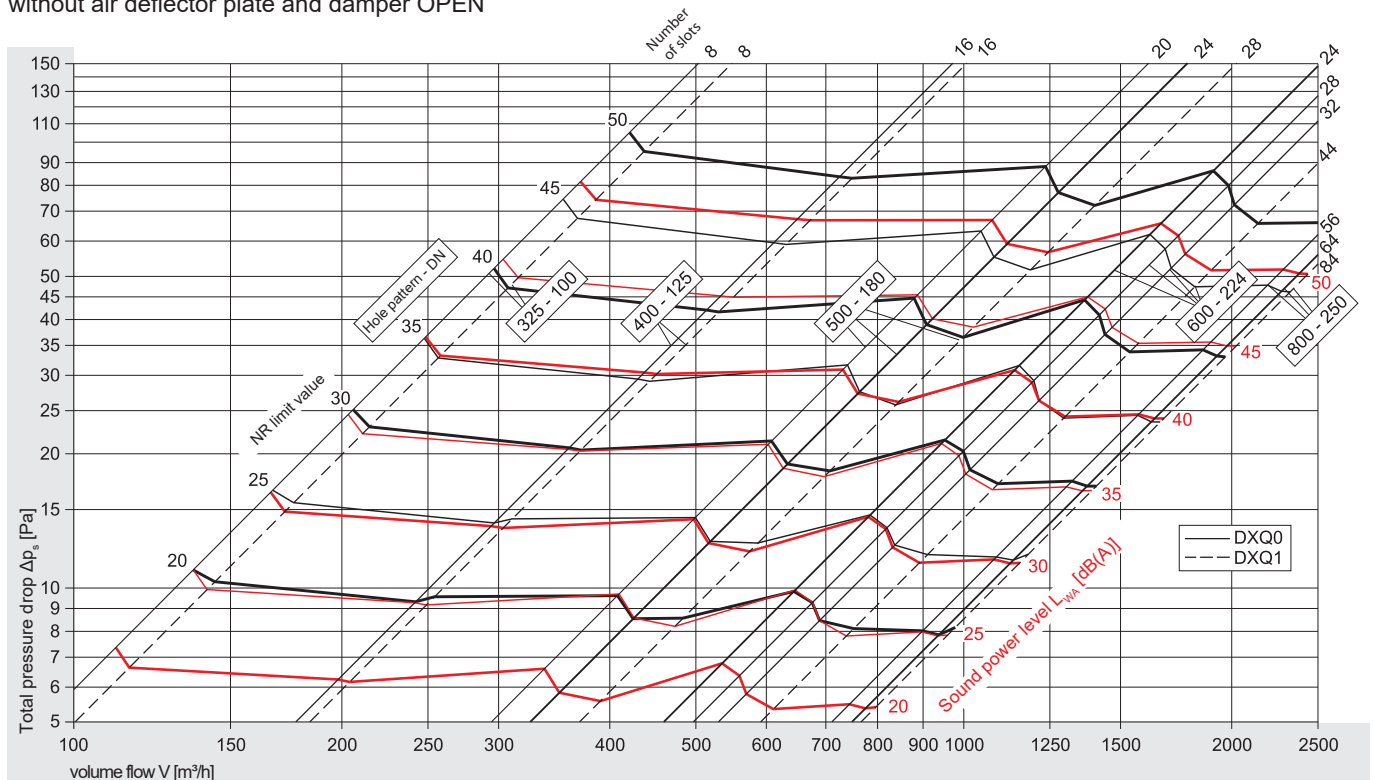
with air deflector plate and damper OPEN



Exhaust air: DXQ with plenum box K2-D

without air deflector plate and damper OPEN

In addition, note the minimum volume flow rates!
⇒ see page 15



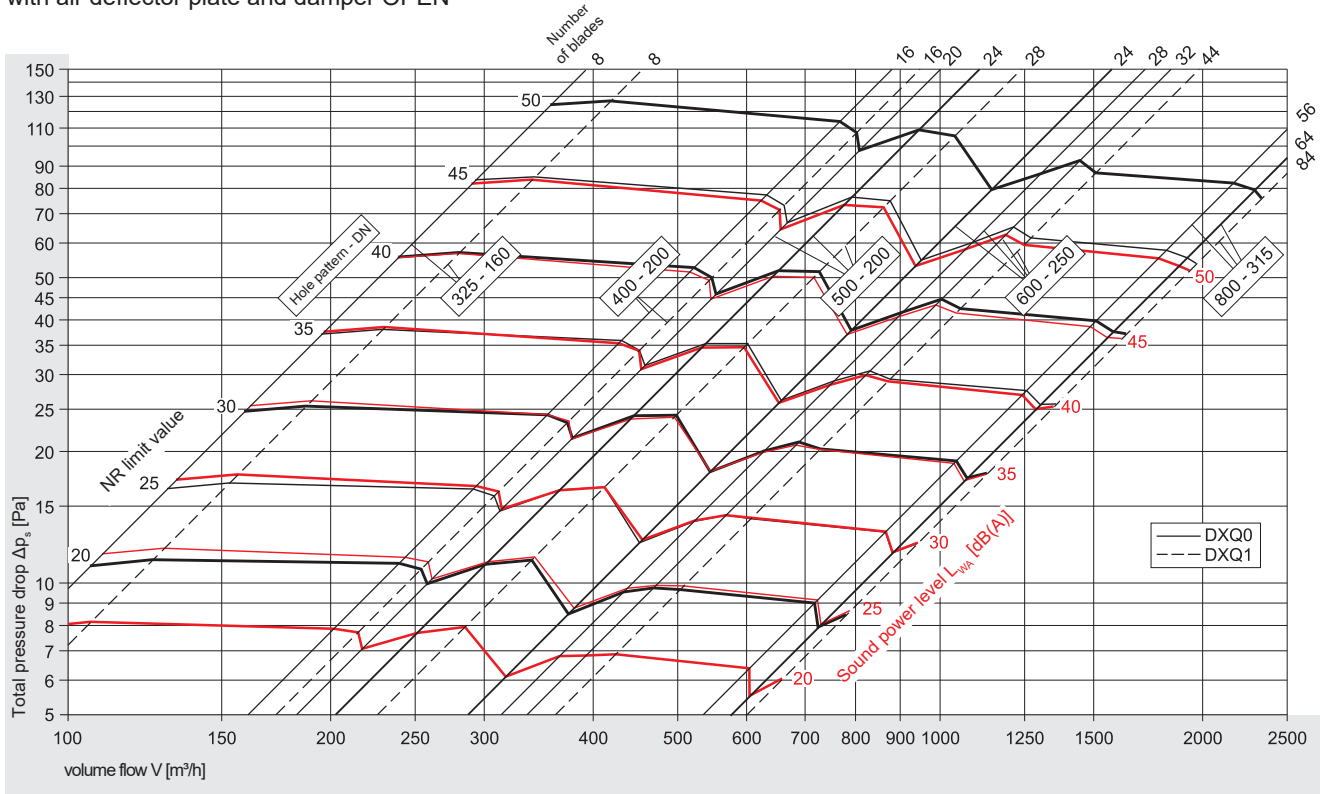
Corrections for other connecting piece sizes and for damper CLOSED ⇒ see pages 18 and 21.
Relative sound power level ΔL for plenum boxes K2 ⇒ see WILDEBOER - dimensioning software.

DX swirl diffuser

Pressure drop, sound power level, NR (noise rating)

Supply air: DXQ with plenum box K3-DL

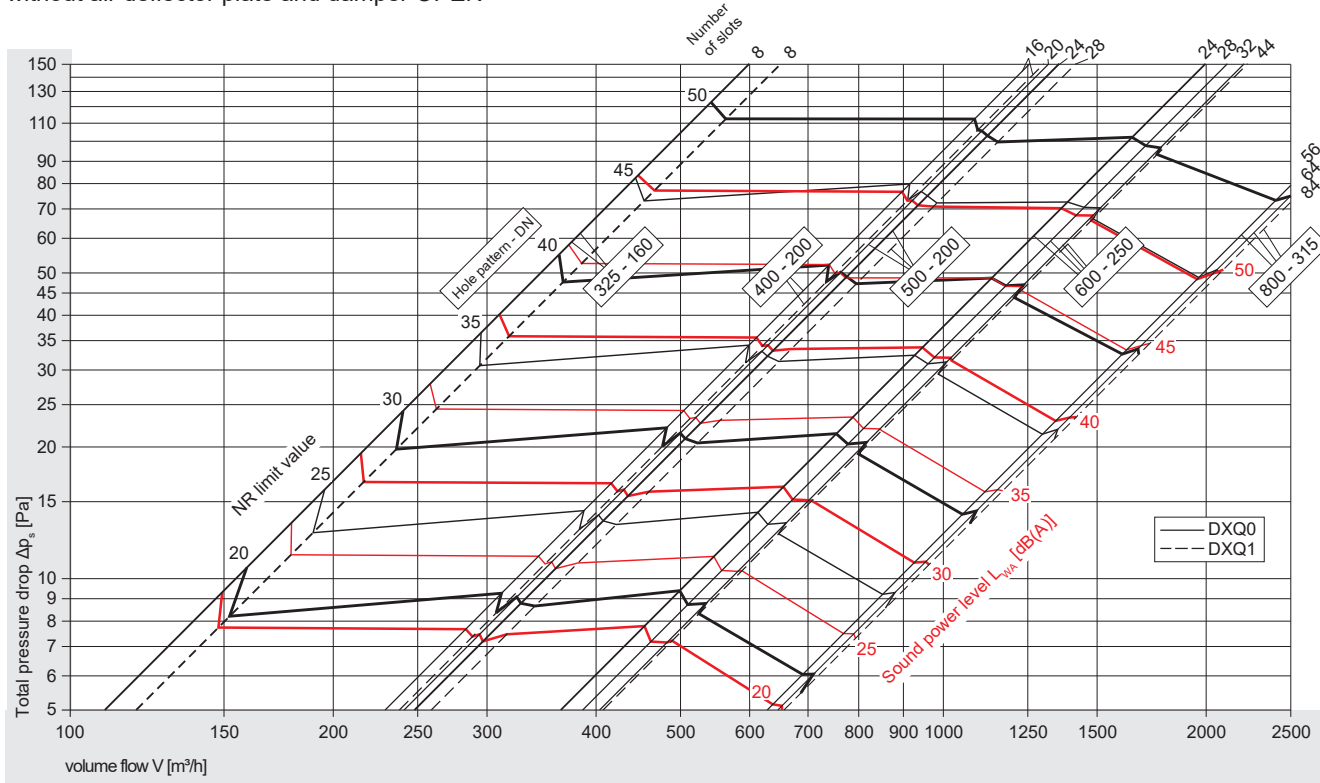
with air deflector plate and damper OPEN



In addition, note the minimum volume flow rates!
 ⇒ see page 15

Exhaust air: DXQ with plenum box K3-D

without air deflector plate and damper OPEN



Corrections for damper CLOSED ⇒ see page 22.

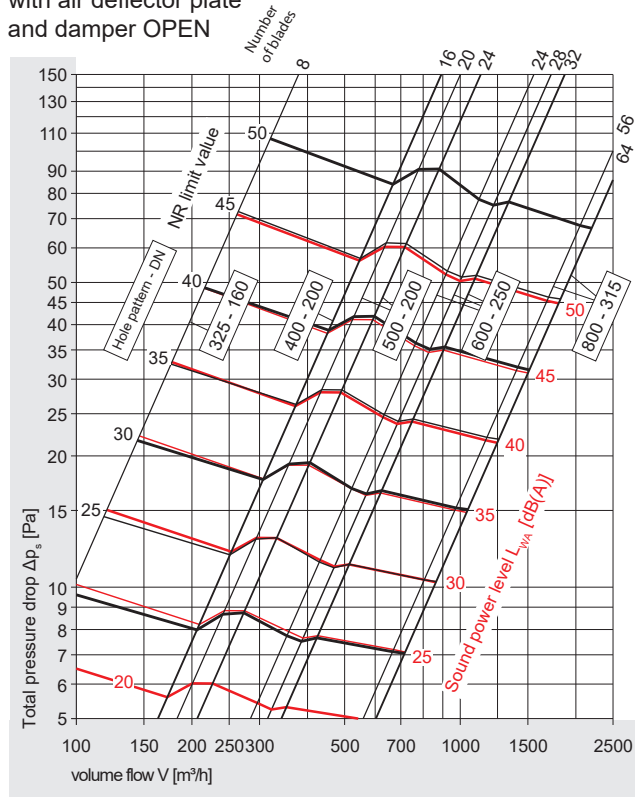
Relative sound power level ΔL for plenum boxes K3 ⇒ see WILDEBOER - dimensioning software.

DX swirl diffuser

Pressure drop, sound power level, NR (noise rating)

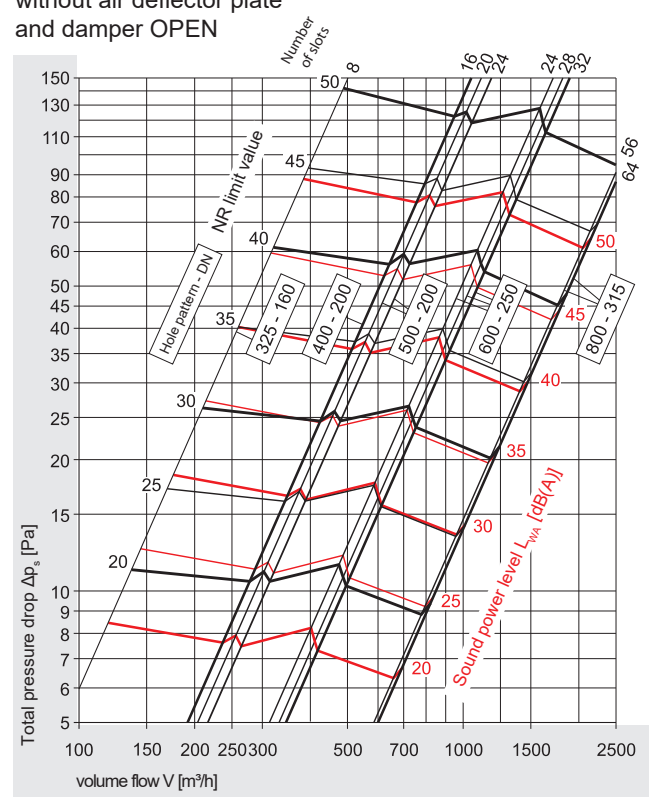
Supply air: DXR0 with plenum box R1-DL

with air deflector plate and damper OPEN



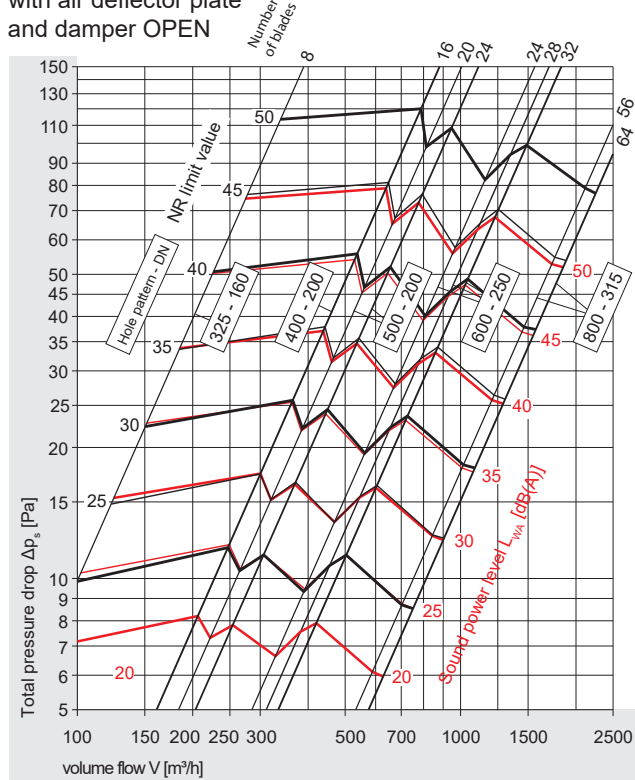
Exhaust air: DXR0 with plenum box R1-D

without air deflector plate and damper OPEN



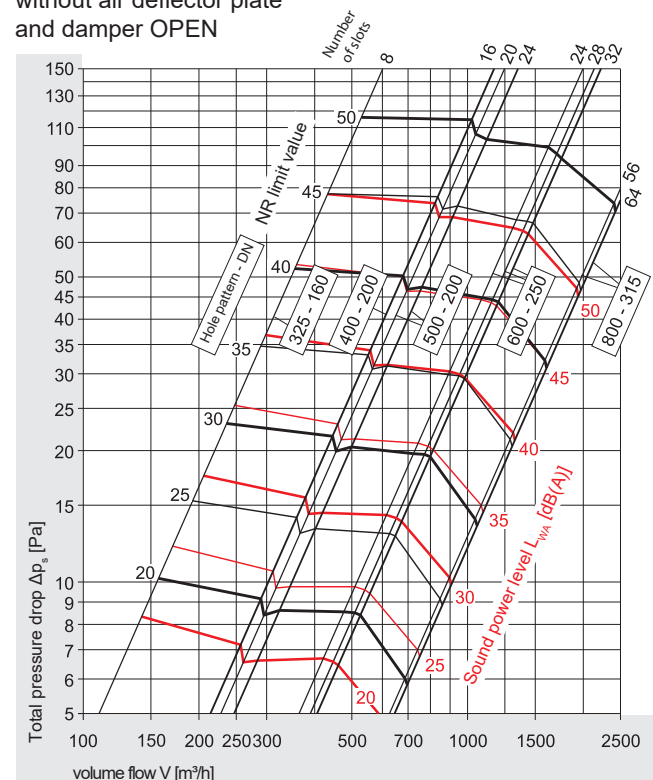
Supply air: DXR0 with plenum box R3-DL

with air deflector plate and damper OPEN



Exhaust air: DXR0 with plenum box R3-D

without air deflector plate and damper OPEN



In addition, note the minimum volume flow rates!
 ⇒ see page 15

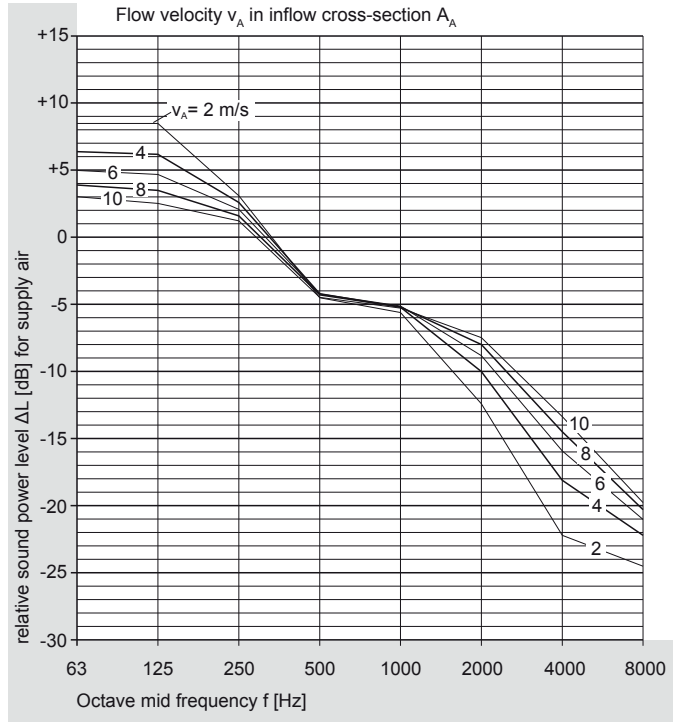
Corrections for other connecting piece sizes and for damper CLOSED ⇒ see pages 19 and 22.
 Relative sound power level ΔL for plenum boxes R1 and R3 ⇒ see WILDEBOER - dimensioning software.

DX swirl diffuser

Relative sound power level

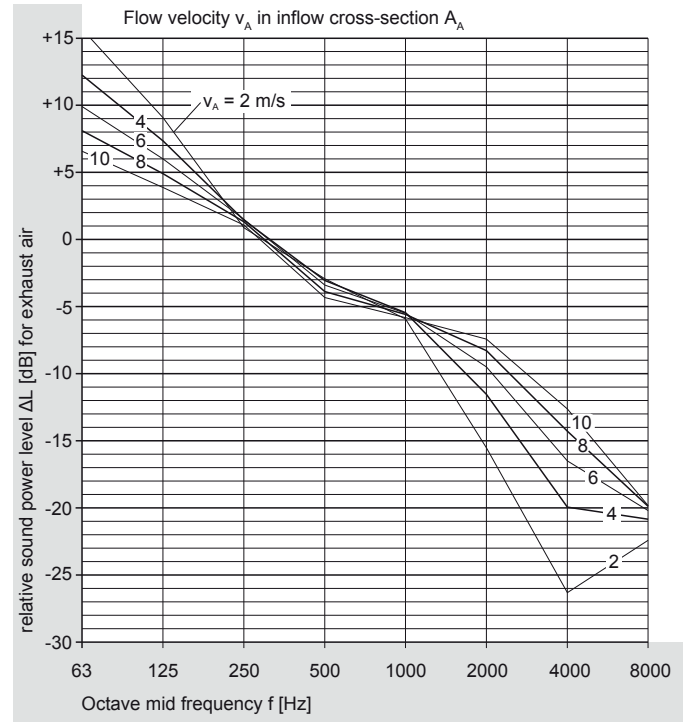
Supply air: DXQ0 with plenum box K1-DL

with air deflector plate and damper OPEN



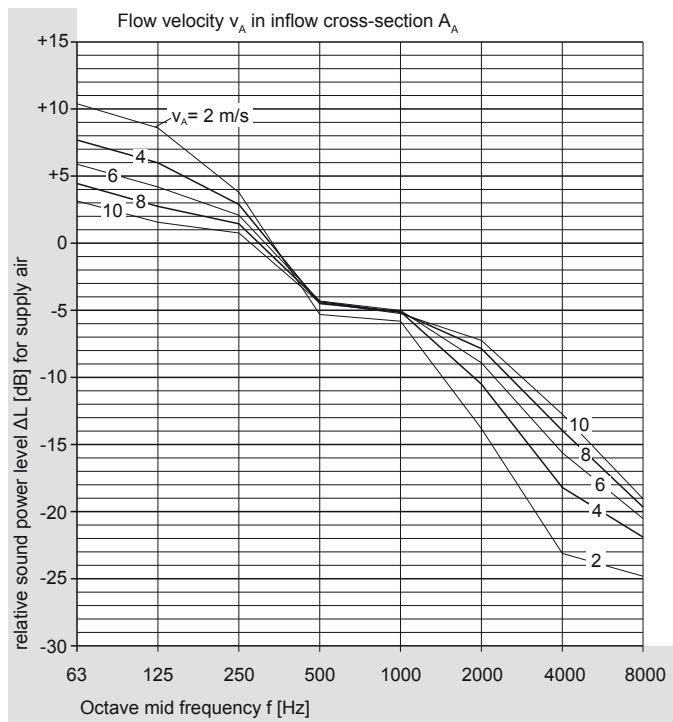
Exhaust air: DXQ0 with plenum box K1-D

without air deflector plate and damper OPEN



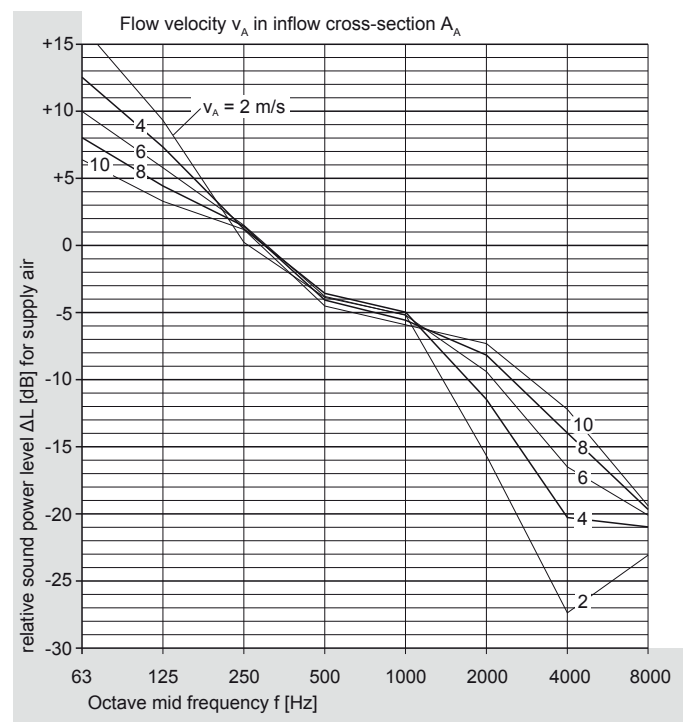
Supply air: DXQ1 with plenum box K1-DL

with air deflector plate and damper OPEN



Exhaust air: DXQ1 with plenum box K1-D

without air deflector plate and damper OPEN



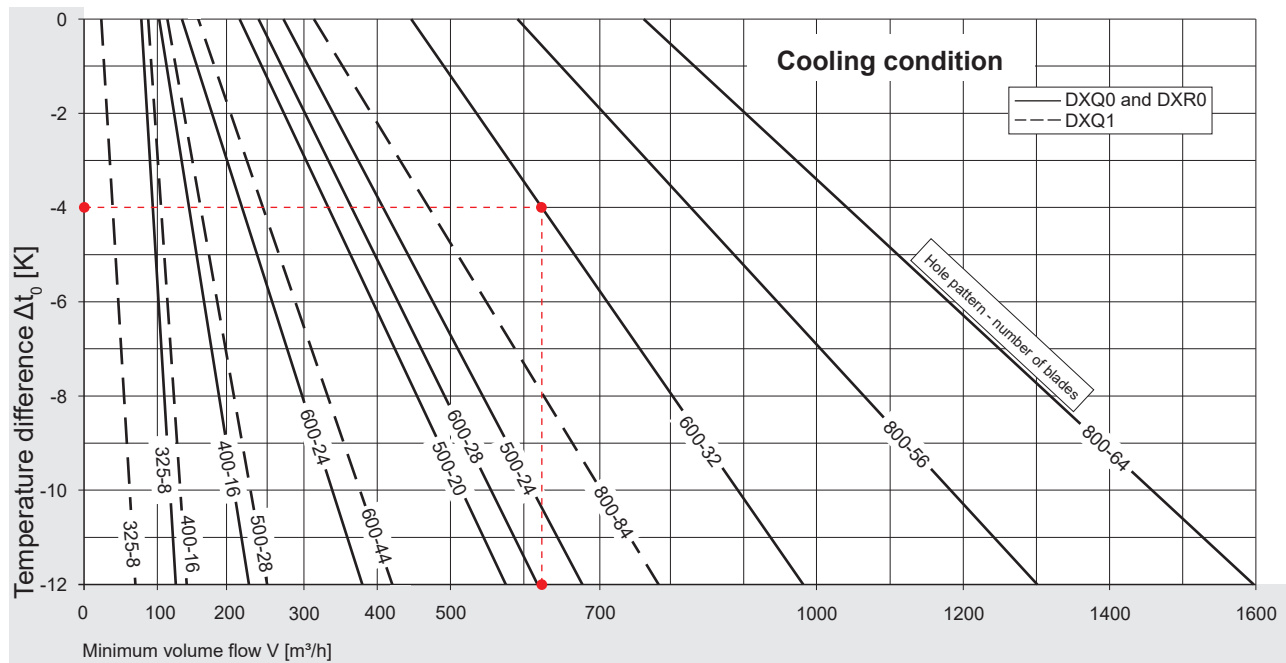
Relative sound power level ΔL for plenum boxes K2, K3, R1 and R3 \Rightarrow see WILDEBOER dimensioning software.

DX swirl diffuser

Area of application, limit curves, room acoustics

Area of application

Plenum boxes installed flush in ceilings are required for optimum air distribution in rooms with heights of approximately 2.5 to 4 m. DX swirl diffusers then divide the supply air radially below the ceilings. Air is deflected into the occupied zone by room walls and counterflows. In the case of cooling, the minimum flow rates given as a cooling condition should be maintained at a given temperature differential Δt_0 between the supply air and room air. A partial drop of cold air by way of stratification, which is associated with draught in the occupied zone, is prevented, and may otherwise occur when cold air is introduced into the room at a higher temperature.



There are generally always minimum volume flow rates to ensure minimum room ventilation, even in heating mode and under isothermal conditions with $\Delta t_0 = 0$ K.

Thermally induced deflections occur with a freely suspended installation. In this respect, the supply air penetrating into the occupied zone can be expected with changed flow velocities. Therefore, comfort criteria can only be met to a limited degree with this type of installation.

Example (\Rightarrow see also page 7)

DXQ0 - 625 - 600 - ML - 32 - K1 - 250 - DL

Room temperature $t_r = 22$ °C
 Supply air temperature $t_0 = 18$ °C
 Temperature differential $\Delta t_0 = -4$ K
 Minimum volume flow (supply air) $V = 620$ m³/h

NOTE

The **minimum volume flow rates** specified according to temperature must also be observed when designing with the nomogram or tables! This can be factored in automatically with the WILDEBOER dimensioning software!

Acoustic limit values NR, NC

The NR limit values given in the nomograms according to ISO 1996 are calculated from octave sound power levels and not in relation to sound pressure levels. The room attenuation ΔL_R is not taken into account. It depends individually on the acoustics of the room. NC limit values should be related like NR limit values to the sound pressure level. In the application area of ventilation and air conditioning, NC may be roughly estimated at $NC = NR - 4$.

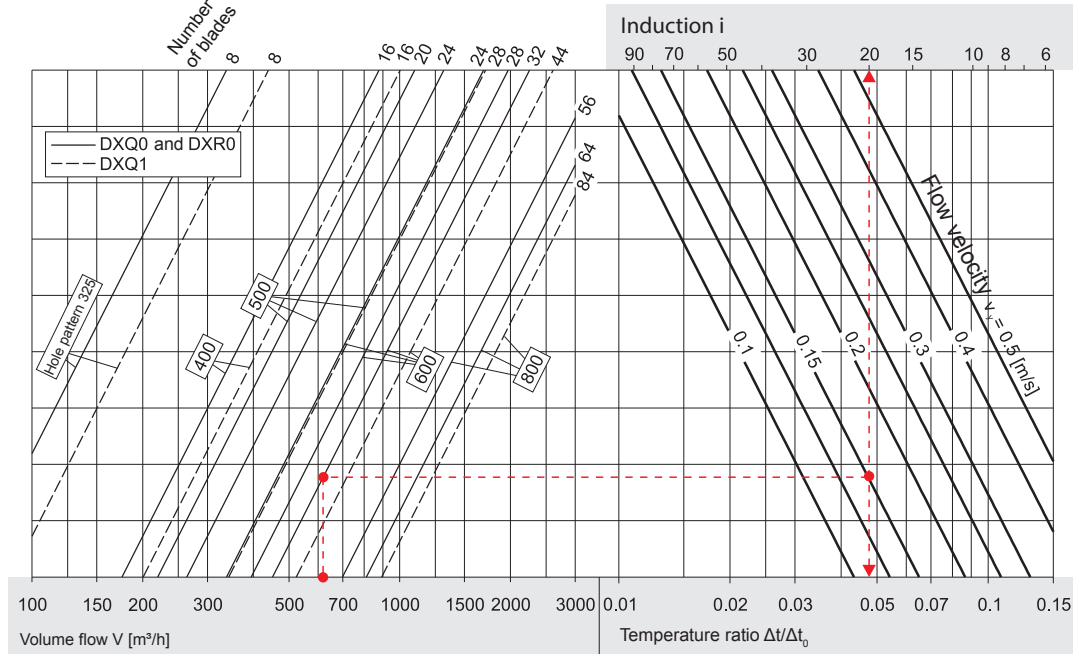
Room attenuation ΔL_R

The nomograms give individual sound power levels. The sum of all the sound pressure levels should be used for the acoustic rating. It differs from the the sum of individual sound power levels by the room attenuation. $L_p, L_{pA} = L_w, L_{wA} + \Delta L_R$. In ventilation and air conditioning systems, ΔL_R can be approximately estimated as equal to - 8 dB.

DX swirl diffuser

Temperature ratio, induction, nomenclature

Temperature ratio, induction



Example (⇒ see also page 7)

DXQ0 - 625 - 600 - ML - 32 - K1 - 250 - DL

Supply air volume flow	V	=	620	m ³ /h
Flow velocity	v_y	=	0.15	m/s
Room temperature	t_R	=	22	°C
Supply air temperature	t_0	=	18	°C
Temperature ratio	$\Delta t/\Delta t_0$	=	0.047	
Temperature	t_y	=	$0.047 \cdot (18 - 22) + 22$	= 21.8 °C
Induction	i	=	20	
Secondary volume flow	V_s	=	$20 \cdot 620$	m ³ /h = 12400m ³ /h

Nomenclature

A_{free}	[m ²]	= Free cross-section of swirl diffuser or exhaust air diffuser	Δt_0	[K]	= Temperature differential; $\Delta t_0 = t_0 - t_R$
DN	[mm]	= Connecting piece size	$\Delta t/\Delta t_0$		= Temperature ratio
A_A	[m ²]	= Inflow cross-section $A_A = (DN [m])^2 \cdot \rho / 4$	i		= Induction
V	[m ³ /h]	= Volume flow	V_s	[m ³ /h]	= Secondary volume flow; $V_s = i \cdot V$
$V_{tot.}$	[m ³ /h]	= Total volume flow	Δp_t	[Pa]	= total pressure drop
v_o	[m/s]	= Flow velocity in A_{free} $v_o = V / (3600 \cdot A_{free})$	Δp_s	[Pa]	= static pressure drop
v_A	[m/s]	= Flow velocity in inflow cross-section A_A $v_A = V / (3600 \cdot A_A)$	L_p	[dB]	= Sound pressure level
v_y	[m/s]	= Flow velocity along jet path	L_{pA}	[dB(A)]	= A-weighted sound pressure level
A, B	[m]	= Distance between two diffusers	L_w	[dB]	= Sound power level
W	[m]	= Distance of diffuser to wall	L_{wA}	[dB(A)]	= A-weighted sound power level
Y	[m]	= Distance from the ceiling	L_{w-OkT}	[dB]	= Octave sound power level $L_{w-OkT} = L_{wA} + DL$
H	[m]	= Room height	ΔL	[dB]	= relative sound power level to L_{wA}
t_y	[°C]	= Temperature along jet path $t_y = (\Delta t/\Delta t_0) \cdot (t_0 - t_R) + t_R$	ΔL_R	[dB]	= acoustic room attenuation
t_0	[°C]	= Supply air temperature	f	[Hz]	= Octave mid frequency
t_R	[°C]	= Room temperature	NR		= NR limit value relating to sound power
			NC		= NC limit value relating to sound power

DX swirl diffuser

Correction values: Plenum box K1 with connecting piece sizes different to standard connecting pieces, damper OPEN

Number of blades ¹⁾		DN	Plenum box size												
			100	125	150	160	180	200	224	250	280	300	315	355	
DXQ0	325 8	Δp	x	1.6	1.2	1.0	1.0	1.0	0.9	-	-	-	-	-	-
		L_{WA}	+	2.6	1.2	0.3	0.0	-0.4	-0.7	-	-	-	-	-	-
	400 16	Δp	x	-	2.6	1.6	1.4	1.2	1.0	0.9	-	-	-	-	-
		L_{WA}	+	-	7.7	4.5	3.4	1.5	0.0	-1.5	-	-	-	-	-
	500 20	Δp	x	-	-	1.9	1.6	1.2	1.0	0.8	0.8	0.7	-	-	-
		L_{WA}	+	-	-	4.6	3.5	1.6	0.0	-1.5	-2.9	-4.1	-	-	-
	500 24	Δp	x	-	-	2.0	1.7	1.2	1.0	0.8	0.7	0.6	-	-	-
		L_{WA}	+	-	-	5.6	4.3	1.9	0.0	-1.9	-3.6	-5.2	-	-	-
	Supply air with air deflection blades	600 ²⁾ 24	Δp	x	-	-	3.5	2.9	2.0	1.5	1.2	1.0	0.9	0.8	0.8
			L_{WA}	+	-	-	11.0	9.5	6.7	4.4	2.1	0.0	-1.9	-3.0	-3.7
	Plenum box K1-DL with air deflector plate	600 ²⁾ 28	Δp	x	-	-	3.9	3.2	2.2	1.6	1.2	1.0	0.8	0.8	0.7
			L_{WA}	+	-	-	13.3	11.4	8.2	5.4	2.5	0.0	-2.4	-3.7	-4.6
	600 ²⁾ 32	Δp	x	-	-	4.5	3.6	2.4	1.8	1.3	1.0	0.8	0.7	0.7-	
		L_{WA}	+	-	-	15.2	13.1	9.4	6.2	2.9	0.0	-2.8	-4.4	-5.5-	
	800 ²⁾ 56	Δp	x	-	-	-	-	-	3.5	2.4	1.7	1.3	1.1	1.0	
		L_{WA}	+	-	-	-	-	-	12.2	8.8	5.7	2.8	1.1	0.0	-2.5
	800 ²⁾ 64	Δp	x	-	-	-	-	-	4.0	2.7	1.9	1.3	1.1	1.0	
		L_{WA}	+	-	-	-	-	-	14.1	10.2	6.7	3.2	1.3	0.0	-3.0
DXQ0	325 8	Δp	x	2.2	1.5	1.1	1.0	0.8	0.7	-	-	-	-	-	
		L_{WA}	+	10.6	5.3	1.3	0.0	-2.3	-4.2	-	-	-	-	-	
	400 16	Δp	x	-	3.8	2.3	1.9	1.3	1.0	0.7	-	-	-	-	
		L_{WA}	+	-	16.2	9.6	7.3	3.4	0.0	-3.4	-	-	-	-	
	500 20	Δp	x	-	-	2.2	1.9	1.3	1.0	0.7	0.5	0.4	-	-	
		L_{WA}	+	-	-	10.7	8.2	3.8	0.0	-3.9	-7.4	-10.7	-	-	
	500 24	Δp	x	-	-	2.4	2.0	1.4	1.0	0.7	0.5	0.4	-	-	
		L_{WA}	+	-	-	11.5	8.8	4.1	0.0	-4.2	-8.0	-11.6	-	-	
	Exhaust air without air deflection blades	600 ²⁾ 24	Δp	x	-	-	4.9	4.0	2.8	2.0	1.4	1.0	0.7	0.6	0.5
			L_{WA}	+	-	-	20.0	17.3	12.4	8.2	3.9	0.0	-3.7	-5.9	-7.3
	Plenum box K1-D without air deflector plate	600 ²⁾ 28	Δp	x	-	-	5.3	4.3	2.9	2.1	1.4	1.0	0.7	0.6	0.5
			L_{WA}	+	-	-	20.5	17.7	12.7	8.4	4.0	0.0	-3.8	-6.0	-7.5
	600 ²⁾ 32	Δp	x	-	-	5.7	4.6	3.1	2.1	1.5	1.0	0.7	0.5	0.5	
		L_{WA}	+	-	-	21.1	18.2	13.1	8.7	4.1	0.0	-4.0	-6.2	-7.8	
	800 ²⁾ 56	Δp	x	-	-	-	-	-	4.7	3.2	2.2	1.5	1.2	1.0	
		L_{WA}	+	-	-	-	-	-	16.9	12.3	8.0	3.9	1.6	0.0	-3.6
	800 ²⁾ 64	Δp	x	-	-	-	-	-	5.0	3.3	2.3	1.5	1.2	1.0	
		L_{WA}	+	-	-	-	-	-	18.2	13.2	8.7	4.2	1.7	0.0	-3.9
DXQ1	325 8	Δp	x	2.0	1.3	1.1	1.0	0.9	0.9	-	-	-	-	-	
		L_{WA}	+	4.1	2.0	0.5	0.0	-0.8	-1.4	-	-	-	-	-	
	Supply air with air deflection blades	400 16	Δp	x	-	2.8	1.7	1.5	1.2	1.0	0.9	-	-	-	-
			L_{WA}	+	-	9.1	5.3	4.0	1.8	0.0	-1.8	-	-	-	-
	Plenum box K1-DL with air deflector plate	500 28	Δp	x	-	-	2.3	1.9	1.3	1.0	0.8	0.6	0.5	-	-
			L_{WA}	+	-	-	7.5	5.7	2.6	0.0	-2.6	-5.0	-7.2	-	-
	600 ²⁾ 44	Δp	x	-	-	4.9	3.9	2.6	1.8	1.3	1.0	0.8	0.7	0.6	
		L_{WA}	+	-	-	17.2	14.8	10.6	7.0	3.3	0.0	-3.2	-5.0	-6.3	
	800 ²⁾ 84	Δp	x	-	-	-	-	-	4.2	2.8	1.9	1.4	1.1	1.0	
		L_{WA}	+	-	-	-	-	-	15.0	10.9	7.1	3.5	1.4	0.0	-3.2
DXQ1	325 8	Δp	x	2.7	1.7	1.1	1.0	0.8	0.6	-	-	-	-	-	
		L_{WA}	+	13.2	6.7	1.7	0.0	-3.0	-5.5	-	-	-	-	-	
	Exhaust air without air deflection blades	400 16	Δp	x	-	4.1	2.4	1.9	1.4	1.0	0.7	-	-	-	-
			L_{WA}	+	-	17.3	10.3	7.9	3.6	0.0	-3.7	-	-	-	-
	Plenum box K1-D without air deflector plate	500 28	Δp	x	-	-	2.6	2.1	1.4	1.0	0.7	0.5	0.3	-	-
			L_{WA}	+	-	-	12.6	9.7	4.5	0.0	-4.6	-8.9	-13.0	-	-
	600 ²⁾ 44	Δp	x	-	-	6.4	5.1	3.3	2.3	1.5	1.0	0.7	0.5	0.4	
		L_{WA}	+	-	-	22.1	19.1	13.7	9.1	4.4	0.0	-4.2	-6.7	-8.3	
	800 ²⁾ 84	Δp	x	-	-	-	-	-	5.2	3.4	2.3	1.5	1.2	1.0	
		L_{WA}	+	-	-	-	-	-	19.2	14.0	9.2	4.5	1.8	0.0	-4.2

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Correction values: Plenum box K2 with connecting piece sizes different to standard connecting pieces, damper OPEN

Number of blades ¹⁾		Plenum box size		DN	100	125	150	160	180	200	224	250	
DXQ0	325	8	Δp	x	1.0	-	-	-	-	-	-	-	
			L_{WA}	+	0.0	-	-	-	-	-	-	-	-
	400	16	Δp	x	1.7	1.0	-	-	-	-	-	-	
			L_{WA}	+	5.9	0.0	-	-	-	-	-	-	
	500	20	Δp	x	-	1.7	1.2	1.1	1.0	-	-	-	
			L_{WA}	+	-	2.8	1.1	0.6	0.0	-	-	-	
	500	24	Δp	x	-	2.0	1.3	1.2	1.0	-	-	-	
			L_{WA}	+	-	5.0	2.1	1.3	0.0	-	-	-	
	Supply air with air deflection blades Plenum box K2-DL with air deflector plate	600 ²⁾	24	Δp	x	-	2.9	1.8	1.6	1.3	1.1	1.0	-
				L_{WA}	+	-	11.0	6.6	5.3	3.1	1.4	0.0	-
600 ²⁾		28	Δp	x	-	3.4	2.0	1.7	1.4	1.1	1.0	-	
			L_{WA}	+	-	14.0	8.7	7.0	4.2	2.0	0.0	-	
600 ²⁾		32	Δp	x	-	4.0	2.3	1.9	1.4	1.2	1.0	-	
			L_{WA}	+	-	17.3	10.9	8.9	5.4	2.6	0.0	-	
800 ²⁾		56	Δp	x	-	-	3.7	3.0	2.1	1.6	1.2	1.0	
			L_{WA}	+	-	-	15.9	13.5	9.3	5.9	2.7	0.0	
800 ²⁾		64	Δp	x	-	-	4.2	3.3	2.3	1.7	1.3	1.0	
			L_{WA}	+	-	-	18.2	15.4	10.7	6.8	3.1	0.0	
DXQ0	325	8	Δp	x	1.0	-	-	-	-	-	-	-	
			L_{WA}	+	0.0	-	-	-	-	-	-	-	
	400	16	Δp	x	2.0	1.0	-	-	-	-	-	-	
			L_{WA}	+	8.9	0.0	-	-	-	-	-	-	
	500	20	Δp	x	-	2.6	1.6	1.3	1.0	-	-	-	
			L_{WA}	+	-	12.0	5.8	3.6	0.0	-	-	-	
	500	24	Δp	x	-	2.9	1.7	1.4	1.0	-	-	-	
			L_{WA}	+	-	12.7	6.1	3.9	0.0	-	-	-	
	Exhaust air without air deflection blades Plenum box K2-D without air deflector plate	600 ²⁾	24	Δp	x	-	5.0	3.0	2.5	1.8	1.4	1.0	-
				L_{WA}	+	-	22.2	14.6	12.0	7.5	3.8	0.0	-
600 ²⁾		28	Δp	x	-	5.7	3.3	2.7	1.9	1.4	1.0	-	
			L_{WA}	+	-	23.4	15.4	12.7	8.0	4.0	0.0	-	
600 ²⁾		32	Δp	x	-	6.2	3.5	2.9	2.0	1.4	1.0	-	
			L_{WA}	+	-	23.7	15.6	12.9	8.1	4.0	0.0	-	
800 ²⁾		56	Δp	x	-	-	4.9	4.0	2.8	2.0	1.4	1.0	
			L_{WA}	+	-	-	19.9	17.1	12.1	7.9	3.7	0.0	
800 ²⁾		64	Δp	x	-	-	5.3	4.3	2.9	2.1	1.4	1.0	
			L_{WA}	+	-	-	20.8	17.8	12.7	8.3	3.9	0.0	
DXQ1	325	8	Δp	x	1.0	-	-	-	-	-	-	-	
			L_{WA}	+	0.0	-	-	-	-	-	-	-	
	400	16	Δp	x	1.7	1.0	-	-	-	-	-	-	
			L_{WA}	+	7.0	0.0	-	-	-	-	-	-	
	500	28	Δp	x	-	2.4	1.4	1.2	1.0	-	-	-	
			L_{WA}	+	-	8.1	3.7	2.3	0.0	-	-	-	
	600 ²⁾	44	Δp	x	-	4.6	2.5	2.1	1.5	1.2	1.0	-	
			L_{WA}	+	-	19.5	12.4	10.1	6.2	3.0	0.0	-	
	800 ²⁾	84	Δp	x	-	-	4.5	3.6	2.4	1.7	1.3	1.0	
			L_{WA}	+	-	-	19.5	16.5	11.5	7.4	3.4	0.0	
DXQ1	325	8	Δp	x	1.0	-	-	-	-	-	-	-	
			L_{WA}	+	0.0	-	-	-	-	-	-	-	
	400	16	Δp	x	2.0	1.0	-	-	-	-	-	-	
			L_{WA}	+	-9.7	0.0	-	-	-	-	-	-	
	500	28	Δp	x	-	3.3	1.8	1.5	1.0	-	-	-	
			L_{WA}	+	-	15.1	7.2	4.6	0.0	-	-	-	
	600 ²⁾	44	Δp	x	-	7.4	4.0	3.2	2.1	1.5	1.0	-	
			L_{WA}	+	-	26.2	17.2	14.2	8.9	4.4	0.0	-	
	800 ²⁾	84	Δp	x	-	-	5.5	4.5	3.0	2.1	1.4	1.0	
			L_{WA}	+	-	-	22.0	18.8	13.3	8.7	4.1	0.0	

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Correction values: Plenum box R1 with connecting piece sizes different to standard connecting pieces, damper OPEN

Number of blades ¹⁾		DN			100	125	150	160	180	200	224	250	280	300	315	355
Plenum box size					100	125	150	160	180	200	224	250	280	300	315	355
DXR0	325 8	Δp	x	1.8	1.3	1.0	1.0	0.9	0.9	-	-	-	-	-	-	-
		L_{WA}	+	2.7	1.2	0.3	0.0	-0.4	-0.7	-	-	-	-	-	-	-
	400 16	Δp	x	-	2.9	1.7	1.5	1.2	1.0	0.9	-	-	-	-	-	-
		L_{WA}	+	-	6.1	3.5	2.6	1.2	0.0	-1.1	-	-	-	-	-	-
	500 20	Δp	x	-	-	1.7	1.5	1.2	1.0	0.9	0.8	0.7	-	-	-	-
		L_{WA}	+	-	-	3.1	2.3	1.0	0.0	-0.9	-1.7	-2.2	-	-	-	-
Supply air	500 24	Δp	x	-	-	2.0	1.6	1.2	1.0	0.8	0.7	0.7	-	-	-	-
		L_{WA}	+	-	-	4.1	3.1	1.4	0.0	-1.3	-2.4	-3.3	-	-	-	-
with air deflection blades	600 24	Δp	x	-	-	3.5	2.9	2.0	1.6	1.2	1.0	0.9	0.8	0.8	-	-
		L_{WA}	+	-	-	9.3	8.0	5.6	3.6	1.7	0.0	-1.5	-2.3	-2.7	-	-
Plenum box R1-DL	600 28	Δp	x	-	-	4.1	3.3	2.3	1.7	1.3	1.0	0.8	0.8	0.7	-	-
		L_{WA}	+	-	-	11.5	9.8	6.9	4.5	2.1	0.0	-1.9	-3.0	-3.6	-	-
with air deflector plate	600 32	Δp	x	-	-	4.7	3.7	2.5	1.8	1.3	1.0	0.8	0.7	0.7	-	-
		L_{WA}	+	-	-	13.5	11.5	8.2	5.3	2.5	0.0	-2.3	-3.6	-4.5	-	-
	800 56	Δp	x	-	-	-	-	-	4.1	2.7	1.8	1.3	1.1	1.0	1.0	0.8
		L_{WA}	+	-	-	-	-	-	11.8	8.5	5.4	2.6	1.0	0.0	-2.3	-4.5
	800 64	Δp	x	-	-	-	-	-	4.5	2.9	2.0	1.4	1.1	1.0	1.0	0.8
		L_{WA}	+	-	-	-	-	-	13.5	9.7	6.3	3.0	1.2	0.0	-2.7	-4.6
DXR0	325 8	Δp	x	2.6	1.7	1.1	1.0	0.8	0.6	-	-	-	-	-	-	-
		L_{WA}	+	13.3	6.8	1.8	0.0	-3.1	-5.9	-	-	-	-	-	-	-
	400 16	Δp	x	-	4.2	2.4	2.0	1.4	1.0	0.7	-	-	-	-	-	-
		L_{WA}	+	-	17.6	10.6	8.1	3.8	0.0	-4.0	-	-	-	-	-	-
	500 20	Δp	x	-	-	2.2	1.9	1.3	1.0	0.7	0.5	0.4	-	-	-	-
		L_{WA}	+	-	-	10.8	8.3	3.9	0.0	-4.0	-7.8	-11.6	-	-	-	-
Exhaust air	500 24	Δp	x	-	-	2.4	2.0	1.4	1.0	0.7	0.5	0.4	-	-	-	-
		L_{WA}	+	-	-	11.7	9.0	4.2	0.0	-4.4	-8.5	-12.6	-	-	-	-
without air deflection blades	600 24	Δp	x	-	-	5.9	4.7	3.1	2.2	1.5	1.0	0.7	0.5	0.5	-	-
		L_{WA}	+	-	-	20.8	18.0	13.1	8.8	4.2	0.0	-4.2	-6.7	-8.4	-	-
Plenum box R1-D	600 28	Δp	x	-	-	6.3	5.0	3.3	2.2	1.5	1.0	0.7	0.5	0.4	-	-
		L_{WA}	+	-	-	21.6	18.7	13.6	9.1	4.4	0.0	-4.4	-7.0	-8.8	-	-
without air deflector plate	600 32	Δp	x	-	-	6.7	5.3	3.4	2.3	1.5	1.0	0.7	0.5	0.4	-	-
		L_{WA}	+	-	-	21.7	18.9	13.7	9.2	4.4	0.0	-4.4	-7.0	-8.8	-	-
	800 56	Δp	x	-	-	-	-	-	5.1	3.4	2.3	1.5	1.2	1.0	1.0	0.7
		L_{WA}	+	-	-	-	-	-	18.0	13.3	8.8	4.4	1.8	0.0	-4.2	-4.6
	800 64	Δp	x	-	-	-	-	-	5.3	3.5	2.3	1.5	1.2	1.0	1.0	0.6
		L_{WA}	+	-	-	-	-	-	19.6	14.5	9.6	4.8	2.0	0.0	-4.6	-4.6

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

DX swirl diffuser

Correction values: Plenum box K1 with damper CLOSED

Number of blades ¹⁾		Plenum box size		DN	100	125	150	160	180	200	224	250	280	300	315	355		
DXQ0	325	8	Δp	x	3.6	2.4	1.6	1.4	1.2	1.2	-	-	-	-	-	-	-	
			L_{WA}	+	10.8	6.0	2.8	1.9	0.9	0.9	-	-	-	-	-	-	-	-
	400	16	Δp	x	-	3.8	3.2	2.9	2.5	2.2	1.8	-	-	-	-	-	-	-
			L_{WA}	+	-	13.9	9.9	8.6	6.3	4.6	3.3	-	-	-	-	-	-	-
	500	20	Δp	x	-	-	3.5	3.2	2.8	2.4	2.0	1.8	1.7	-	-	-	-	-
			L_{WA}	+	-	-	12.5	10.5	7.1	4.7	2.8	2.3	3.4	-	-	-	-	-
	500	24	Δp	x	-	-	4.4	4.1	3.5	3.0	2.5	2.1	1.9	-	-	-	-	-
			L_{WA}	+	-	-	15.2	13.3	10.0	7.4	5.3	4.1	4.3	-	-	-	-	-
	Supply air with air deflection blades Plenum box K1-DL	600 ²⁾	24	Δp	x	-	-	3.8	3.7	3.4	3.2	2.9	2.6	2.1	1.8	1.6	-	-
				L_{WA}	+	-	-	15.5	14.1	11.4	9.1	6.8	5.0	3.8	3.4	3.3	-	-
	Plenum box K1-DL with air deflector plate	600 ²⁾	28	Δp	x	-	-	3.4	3.4	3.3	3.1	3.0	2.7	2.3	2.0	1.7	-	-
				L_{WA}	+	-	-	14.8	13.6	11.4	9.5	7.6	6.0	4.8	4.3	4.2	-	-
	600 ²⁾	32	Δp	x	-	-	4.1	4.1	4.0	3.9	3.6	3.2	2.7	2.21.8-	-	-	-	
			L_{WA}	+	-	-	17.2	16.1	14.2	12.4	10.5	8.6	6.9	5.95.3-	-	-	-	-
	800 ²⁾	56	Δp	x	-	-	-	-	-	4.3	4.2	3.9	3.5	3.2	2.9	1.9	-	
			L_{WA}	+	-	-	-	-	-	17.7	15.5	13.2	10.6	8.9	7.7	4.5	-	-
	800 ²⁾	64	Δp	x	-	-	-	-	-	4.5	4.4	4.1	3.7	3.4	3.1	2.3	-	
			L_{WA}	+	-	-	-	-	-	18.3	16.1	13.8	11.4	9.9	8.8	6.3	-	-
DXQ0	325	8	Δp	x	3.4	2.4	1.8	1.6	1.5	1.6	-	-	-	-	-	-	-	
			L_{WA}	+	14.6	11.5	8.9	8.1	6.8	5.8	-	-	-	-	-	-	-	-
	400	16	Δp	x	-	3.2	3.0	2.9	2.8	2.6	2.4	-	-	-	-	-	-	
			L_{WA}	+	-	13.3	13.8	13.8	13.3	12.3	10.5	-	-	-	-	-	-	-
	500	20	Δp	x	-	-	3.5	3.3	3.0	2.7	2.4	2.3	2.2	-	-	-	-	
			L_{WA}	+	-	-	14.2	14.0	13.6	13.2	12.7	12.1	11.4	-	-	-	-	-
	500	24	Δp	x	-	-	3.5	3.3	3.1	2.9	2.7	2.5	2.5	-	-	-	-	
			L_{WA}	+	-	-	14.0	14.0	14.1	14.0	13.7	13.3	12.5	-	-	-	-	-
	Exhaust air without air deflection blades Plenum box K1-D	600 ²⁾	24	Δp	x	-	-	3.4	3.3	3.2	3.0	2.9	2.7	2.6	2.5	2.5	-	-
				L_{WA}	+	-	-	14.6	14.4	14.0	13.6	13.2	12.8	12.4	12.1	11.9	-	-
	Plenum box K1-D without air deflector plate	600 ²⁾	28	Δp	x	-	-	3.4	3.4	3.3	3.2	3.1	3.0	2.8	2.7	2.6	-	-
				L_{WA}	+	-	-	14.5	14.3	14.0	13.7	13.4	13.1	12.9	12.8	12.8	-	-
	600 ²⁾	32	Δp	x	-	-	3.4	3.4	3.4	3.3	3.2	3.1	3.0	2.9	2.8	-	-	
			L_{WA}	+	-	-	14.7	14.7	14.7	14.6	14.4	14.0	13.5	13.1	12.7	-	-	-
	800 ²⁾	56	Δp	x	-	-	-	-	-	3.7	3.7	3.6	3.4	3.2	3.1	2.6	-	
			L_{WA}	+	-	-	-	-	-	15.1	15.5	15.5	14.8	14.0	13.1	10.1	-	-
	800 ²⁾	64	Δp	x	-	-	-	-	-	3.8	3.7	3.6	3.5	3.3	3.2	2.8	-	
			L_{WA}	+	-	-	-	-	-	14.5	15.1	15.4	15.0	14.5	13.9	11.6	-	-
DXQ1	325	8	Δp	x	3.4	2.5	1.9	1.7	1.4	1.2	-	-	-	-	-	-	-	
			L_{WA}	+	14.4	7.6	3.2	2.1	0.9	1.3	-	-	-	-	-	-	-	-
	Supply air with air deflection blades Plenum box K1-DL	400	16	Δp	x	-	3.9	3.3	3.1	2.7	2.3	1.9	-	-	-	-	-	
				L_{WA}	+	-	15.0	11.0	9.6	7.2	5.4	3.8	-	-	-	-	-	-
	Plenum box K1-DL with air deflector plate	500	28	Δp	x	-	-	4.4	4.1	3.7	3.2	2.8	2.4	2.0	-	-	-	
				L_{WA}	+	-	-	16.6	14.9	12.0	9.5	7.3	5.7	4.9	-	-	-	-
	600 ²⁾	44	Δp	x	-	-	4.2	4.2	4.0	3.9	3.6	3.2	2.7	2.4	2.0	-		
			L_{WA}	+	-	-	17.1	16.3	14.7	13.1	11.4	9.7	7.9	6.8	6.0	-	-	
	800 ²⁾	84	Δp	x	-	-	-	-	-	4.7	4.5	4.3	3.8	3.5	3.2	2.3		
			L_{WA}	+	-	-	-	-	-	18.2	16.6	14.7	12.4	10.7	9.5	5.9	-	
DXQ1	325	8	Δp	x	3.6	2.7	2.1	1.9	1.7	1.7	-	-	-	-	-	-		
			L_{WA}	+	14.8	12.4	10.5	9.9	8.9	8.2	-	-	-	-	-	-	-	
	Exhaust air without air deflection blades Plenum box K1-D	400	16	Δp	x	-	3.3	3.2	3.2	3.0	2.8	2.6	-	-	-	-		
				L_{WA}	+	-	13.7	14.2	14.3	14.0	13.3	11.9	-	-	-	-	-	
	Plenum box K1-D without air deflector plate	500	28	Δp	x	-	-	3.7	3.6	3.4	3.2	3.0	2.9	2.9	-	-	-	
				L_{WA}	+	-	-	14.8	14.9	14.9	14.9	14.8	14.6	14.1	-	-	-	-
	600 ²⁾	44	Δp	x	-	-	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	-		
			L_{WA}	+	-	-	15.3	15.0	14.5	14.1	13.6	13.3	13.0	13.0	13.0	-	-	
	800 ²⁾	84	Δp	x	-	-	-	-	-	3.8	3.7	3.5	3.4	3.2	2.8			
			L_{WA}	+	-	-	-	-	-	14.5	16.0	16.8	16.7	16.2	15.4	12.2		

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Correction values: Plenum box K2 with damper CLOSED

Number of blade ¹⁾		Plenum box size		DN	100	125	150	160	180	200	224	250	
DXQ0	325	8	Δp	x	2.0	-	-	-	-	-	-	-	
			L_{WA}	+	3.4	-	-	-	-	-	-	-	-
	400	16	Δp	x	3.8	3.5	-	-	-	-	-	-	-
			L_{WA}	+	13.8	10.5	-	-	-	-	-	-	-
	500	20	Δp	x	-	3.8	2.9	2.5	1.8	-	-	-	-
			L_{WA}	+	-	12.4	7.5	5.6	1.7	-	-	-	-
	500	24	Δp	x	-	4.2	3.2	2.8	2.0	-	-	-	-
			L_{WA}	+	-	14.8	9.5	7.4	3.2	-	-	-	-
	Supply air with air deflection blades	600 ²⁾	24	Δp	x	-	4.4	3.4	3.0	2.4	2.0	1.6	-
				L_{WA}	+	-	15.2	9.5	7.7	4.8	2.9	2.0	-
Plenum box K2-DL with air deflector plate	600 ²⁾	28	Δp	x	-	4.7	3.6	3.3	2.7	2.2	1.8	-	
			L_{WA}	+	-	16.3	11.2	9.4	6.6	4.4	2.9	-	
	600 ²⁾	32	Δp	x	-	4.9	3.9	3.6	3.0	2.5	2.0	-	
			L_{WA}	+	-	16.7	12.5	11.1	8.6	6.5	4.7	-	
	800 ²⁾	56	Δp	x	-	-	4.2	4.0	3.7	3.4	3.1	2.8	
			L_{WA}	+	-	-	15.9	15.1	13.6	12.0	10.2	8.3	
	800 ²⁾	64	Δp	x	-	-	4.3	4.2	4.0	3.7	3.4	3.1	
			L_{WA}	+	-	-	15.9	15.5	14.6	13.4	11.7	9.4	
DXQ0	325	8	Δp	x	2.8	-	-	-	-	-	-	-	
			L_{WA}	+	13.4	-	-	-	-	-	-	-	-
	400	16	Δp	x	3.8	4.0	-	-	-	-	-	-	
			L_{WA}	+	14.9	16.0	-	-	-	-	-	-	-
	500	20	Δp	x	-	3.8	3.1	2.8	2.2	-	-	-	
			L_{WA}	+	-	14.7	12.4	11.5	9.7	-	-	-	
	500	24	Δp	x	-	3.9	3.3	3.0	2.5	-	-	-	
			L_{WA}	+	-	14.8	12.8	12.0	10.4	-	-	-	
	Exhaust air without air deflection blades	600 ²⁾	24	Δp	x	-	4.5	3.4	3.0	2.5	2.2	2.1	-
				L_{WA}	+	-	15.9	13.4	12.6	11.3	10.5	10.2	-
Plenum box K2-D without air deflector plate	600 ²⁾	28	Δp	x	-	4.6	3.5	3.2	2.7	2.4	2.3	-	
			L_{WA}	+	-	15.6	13.7	13.1	12.1	11.5	11.1	-	
	600 ²⁾	32	Δp	x	-	4.7	3.7	3.4	2.9	2.6	2.5	-	
			L_{WA}	+	-	15.6	13.7	13.1	12.2	11.5	11.2	-	
	800 ²⁾	56	Δp	x	-	-	1.4	2.3	3.7	4.5	4.5	3.3	
			L_{WA}	+	-	-	1.9	6.5	13.4	17.5	18.6	15.0	
	800 ²⁾	64	Δp	x	-	-	4.2	4.0	3.8	3.6	3.6	3.6	
			L_{WA}	+	-	-	14.8	14.4	14.0	14.0	14.4	15.6	
DXQ1	325	8	Δp	x	2.3	-	-	-	-	-	-	-	
			L_{WA}	+	5.6	-	-	-	-	-	-	-	-
	400	16	Δp	x	4.1	3.8	-	-	-	-	-	-	
			L_{WA}	+	15.2	12.3	-	-	-	-	-	-	-
	Supply air with air deflection blades	500	28	Δp	x	-	4.7	3.7	3.3	2.5	-	-	-
				L_{WA}	+	-	16.8	12.3	10.4	6.8	-	-	-
	Plenum box K2-DL with air deflector plate	600 ²⁾	44	Δp	x	-	5.0	4.1	3.8	3.2	2.7	2.2	-
				L_{WA}	+	-	16.6	13.2	12.0	9.8	8.0	6.2	-
		800 ²⁾	84	Δp	x	-	-	4.3	4.2	4.0	3.8	3.5	3.3
				L_{WA}	+	-	-	15.6	15.2	14.4	13.4	12.1	10.3
DXQ1	325	8	Δp	x	3.1	-	-	-	-	-	-	-	
			L_{WA}	+	14.0	-	-	-	-	-	-	-	-
	400	16	Δp	x	4.2	4.1	-	-	-	-	-	-	
			L_{WA}	+	15.3	17.0	-	-	-	-	-	-	-
	Exhaust air without air deflection blades	500	28	Δp	x	-	4.4	3.7	3.5	3.0	-	-	-
				L_{WA}	+	-	15.8	14.1	13.5	12.2	-	-	-
	Plenum box K2-D without air deflector plate	600 ²⁾	44	Δp	x	-	4.9	3.9	3.6	3.2	2.8	2.7	-
				L_{WA}	+	-	15.3	13.4	12.9	12.0	11.6	11.6	-
		800 ²⁾	84	Δp	x	-	-	4.3	4.1	3.9	3.8	3.7	3.7
				L_{WA}	+	-	-	14.8	14.6	14.5	14.7	15.2	16.1

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Correction values: Plenum boxes K3, R1 and R3 with damper CLOSED

Number of blades ¹⁾		DN	Plenum box size													
			100	125	150	160	180	200	224	250	280	300	315	355		
DXR0	325	8	Δp x	2.8	2.3	1.8	1.7	1.4	1.3	-	-	-	-	-	-	
			L_{WA} +	9.3	5.4	2.5	1.7	0.4	-0.2	-	-	-	-	-	-	
	400	16	Δp x	-	5.1	4.3	4.0	3.3	2.6	1.8	-	-	-	-	-	
			L_{WA} +	-	18.7	11.4	9.1	5.7	3.7	3.2	-	-	-	-	-	
	500	20	Δp x	-	-	3.7	3.5	3.2	2.9	2.5	2.1	1.6	-	-	-	
			L_{WA} +	-	-	12.8	11.4	8.8	6.5	4.2	2.3	0.7	-	-	-	
	Supply air with air deflection blades Plenum box R1-DL with air deflector plate	500	24	Δp x	-	-	4.1	4.0	3.7	3.4	3.0	2.5	1.8	-	-	-
				L_{WA} +	-	-	14.9	13.7	11.4	9.2	6.8	4.3	1.8	-	-	-
		600	24	Δp x	-	-	4.4	4.3	4.0	3.6	3.3	2.9	2.4	2.1	1.9	-
				L_{WA} +	-	-	17.5	17.2	16.3	15.1	13.2	10.6	6.9	4.0	1.7	-
600		28	Δp x	-	-	4.9	4.8	4.6	4.4	4.1	3.6	3.0	2.5	2.1	-	
			L_{WA} +	-	-	18.0	17.1	15.4	13.6	11.4	8.9	6.0	4.0	2.5	-	
600		32	Δp x	-	-	5.0	5.0	5.0	4.9	4.7	4.2	3.5	2.9	2.4	-	
			L_{WA} +	-	-	18.4	18.0	17.0	15.7	13.8	11.5	8.3	5.8	3.9	-	
800		56	Δp x	-	-	-	-	-	5.0	5.1	5.0	4.6	4.2	3.8	2.3	
			L_{WA} +	-	-	-	-	-	19.7	18.2	16.1	13.1	10.8	8.8	3.0	
800	64	Δp x	-	-	-	-	-	5.3	5.5	5.4	5.1	4.6	4.2	2.6		
		L_{WA} +	-	-	-	-	-	20.1	19.0	17.3	14.6	12.4	10.6	4.8		
DXR0	325	8	Δp x	2.9	2.4	2.0	1.9	1.7	1.6	-	-	-	-	-		
			L_{WA} +	13.4	11.6	9.7	9.0	7.5	6.0	-	-	-	-	-		
	400	16	Δp x	-	4.2	3.8	3.6	3.2	2.8	2.3	-	-	-	-		
			L_{WA} +	-	21.8	19.9	19.0	17.0	14.8	11.7	-	-	-	-		
	500	20	Δp x	-	-	3.2	3.1	3.0	2.9	2.7	2.5	2.2	-	-		
			L_{WA} +	-	-	14.4	14.7	15.0	15.1	14.7	13.9	12.4	-	-		
	Exhaust air without air deflection blades Plenum box R1-D without air deflector plate	500	24	Δp x	-	-	3.4	3.4	3.3	3.2	3.0	2.8	2.5	-	-	
				L_{WA} +	-	-	14.8	15.2	15.8	16.0	15.9	15.3	13.9	-	-	
		600	24	Δp x	-	-	3.4	3.4	3.4	3.3	3.2	3.1	2.9	2.7	2.5	
				L_{WA} +	-	-	17.4	17.9	18.6	19.0	18.9	18.2	16.6	15.1	13.8	
600		28	Δp x	-	-	3.6	3.6	3.6	3.6	3.5	3.3	3.1	2.9	2.8		
			L_{WA} +	-	-	17.1	17.7	18.5	19.0	19.1	18.6	17.2	15.8	14.5		
600		32	Δp x	-	-	3.6	3.7	3.7	3.7	3.7	3.6	3.3	3.1	2.9		
			L_{WA} +	-	-	17.6	18.3	19.3	19.8	19.9	19.2	17.6	15.9	14.3		
800		56	Δp x	-	-	-	-	-	3.9	3.9	3.9	3.8	3.6	3.4	2.8	
			L_{WA} +	-	-	-	-	-	18.9	16.9	15.3	14.1	13.8	13.7	14.6	
800	64	Δp x	-	-	-	-	-	3.9	4.0	4.0	3.9	3.7	3.5	2.9		
		L_{WA} +	-	-	-	-	-	18.9	19.8	20.2	20.0	19.5	18.9	16.5		

DXQ0 and DXR0		Number of blades ¹⁾	Plenum box size	DN	K3		R3	
					Supply air	Exhaust air	Supply air	Exhaust air
325	8	160	Δp x	1.8	2.5	1.6	2.3	
			L_{WA} +	2.1	12.5	1.4	11.6	
400	16	200	Δp x	2.3	3.0	2.3	2.8	
			L_{WA} +	6.2	12.5	6.5	13.9	
500	20	200	Δp x	2.8	3.8	3.0	3.4	
			L_{WA} +	6.3	13.4	7.0	13.2	
500	24	200	Δp x	3.2	3.8	3.4	3.9	
			L_{WA} +	9.5	11.7	10.0	13.7	
600 ²⁾	24	250	Δp x	2.5	3.5	2.4	3.1	
			L_{WA} +	4.9	14.8	5.0	13.2	
600 ²⁾	28	250	Δp x	2.8	3.5	2.7	3.4	
			L_{WA} +	7.8	13.1	8.3	13.8	
600 ²⁾	32	250	Δp x	3.0	4.1	2.9	3.6	
			L_{WA} +	9.8	14.6	10.2	13.7	
800 ²⁾	56	315	Δp x	3.1	3.4	2.8	3.4	
			L_{WA} +	7.3	10.0	7.5	9.4	
800 ²⁾	64	315	Δp x	3.3	3.9	3.1	3.6	
			L_{WA} +	9.5	10.8	9.1	8.8	

DXQ1		Number of blades ¹⁾	Plenum box size	DN	K3	
					Supply air	Exhaust air
325	8	160	Δp x	2.1	2.8	
			L_{WA} +	3.9	12.9	
400	16	200	Δp x	2.5	3.1	
			L_{WA} +	7.6	13.3	
500	28	200	Δp x	3.7	4.1	
			L_{WA} +	12.7	11.7	
600 ²⁾	44	250	Δp x	3.6	3.8	
			L_{WA} +	12.4	13.5	
800 ²⁾	84	315	Δp x	3.4	4.0	
			L_{WA} +	11.0	11.2	

The correction values are mean values for the whole volume flow range, otherwise see WILDEBOER dimensioning software.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Installation notes

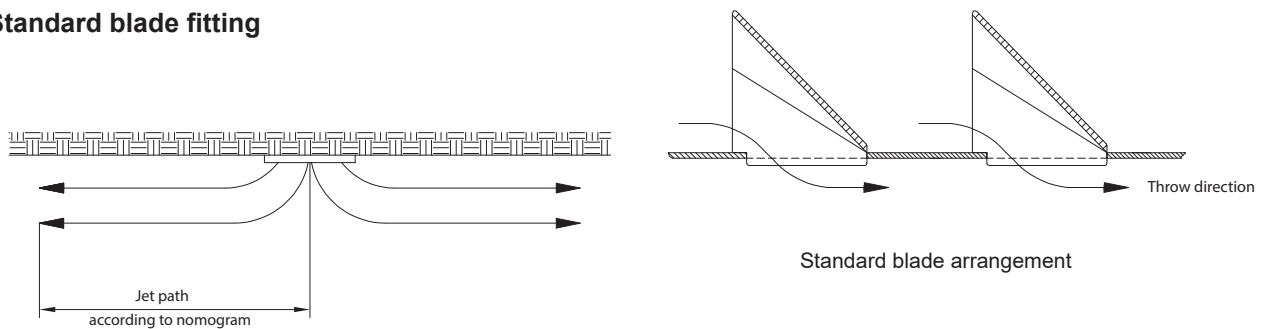
Jet deflection

- The airflow spreads horizontally with the standard blade fitting. The blades are arranged such that the progressively designed arrangement angles of the repositionable air deflection blades over the longitudinal extension become more flat towards the outside in order to optimise the air throw pattern.
- The airflow direction can also be retrospectively adjusted to the spatial requirements by repositioning the air deflection blades. The air deflection blades in the installed state can also be very easily removed and vice versa re-inserted. The air deflection blades can be slightly pressed together on the front edge of the lateral sides and effortlessly removed by rotating. In order to re-insert them, the rear edge of the blades is inserted into the opening and pressed until it locks into place.

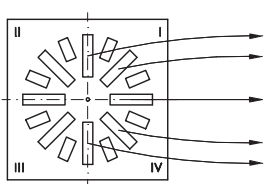
The volume flow may have to be slightly reduced in order to offset local increases in flow velocity.

- A vertical free jet of supply air is produced when there are no blades.

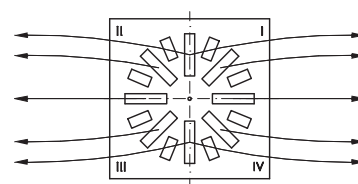
Standard blade fitting



Adjusting jet deflection by repositioning the blades.

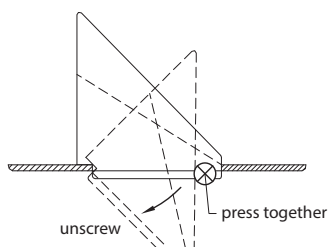


One-side jet deflection
by repositioning the blades in quadrants III and IV.

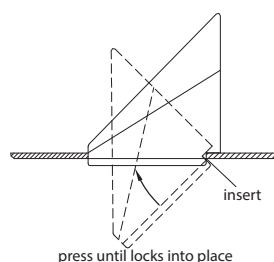


Two-sided jet deflection
by repositioning the blades in quadrants II and IV.

remove blade



insert blade



DX swirl diffuser

Quick selection DXQ0

Volume flow [m³/h] / pressure drop [Pa]

Number of blades ¹⁾	Connecting piece size DN	Plenum box size	Sound power level [dB(A)]								
			20	25	30	35	40	45	50		
Supply air DXQ0	325	100	8	80 / 10	100 / 15	120 / 22	140 / 30	180 / 49	210 / 67	260 / 102	
		160	8	90 / 8	110 / 12	130 / 16	160 / 25	190 / 35	240 / 56	290 / 81	
		200	8	90 / 7	110 / 11	140 / 18	170 / 26	200 / 36	240 / 52	290 / 76	
	400	125	16	140 / 11	170 / 16	210 / 24	250 / 34	300 / 49	370 / 74	450 / 110	
		200	16	190 / 7	230 / 11	280 / 16	340 / 24	410 / 35	490 / 50	600 / 75	
		224	16	200 / 7	250 / 11	300 / 17	360 / 24	430 / 34	520 / 50	630 / 73	
	500	150	20	180 / 9	220 / 14	270 / 20	320 / 29	390 / 43	480 / 64	580 / 94	
		200	20	220 / 7	270 / 11	320 / 15	390 / 22	470 / 32	570 / 48	690 / 70	
		280	20	260 / 7	310 / 10	380 / 15	460 / 21	550 / 31	660 / 44	790 / 63	
	with air deflection blades	500	150	24	200 / 9	240 / 13	290 / 19	350 / 28	430 / 42	520 / 62	630 / 90
			200	24	250 / 7	300 / 10	360 / 15	440 / 22	530 / 32	640 / 46	780 / 69
			280	24	310 / 7	370 / 10	450 / 15	540 / 21	650 / 31	780 / 44	940 / 65
	plenum box K1-DL	600 ²⁾	150	24	210 / 10	260 / 15	320 / 22	380 / 31	460 / 46	560 / 68	680 / 100
			250	24	330 / 7	400 / 10	480 / 14	580 / 21	700 / 30	850 / 44	1020 / 64
			315	24	390 / 7	460 / 10	560 / 15	670 / 21	810 / 31	970 / 44	1160 / 64
	with air deflector plate	600 ²⁾	150	28	220 / 10	260 / 14	320 / 21	390 / 31	470 / 45	570 / 66	690 / 96
			250	28	370 / 7	440 / 10	530 / 14	640 / 21	770 / 30	930 / 44	1130 / 66
			315	28	440 / 7	530 / 10	640 / 15	770 / 22	920 / 31	1110 / 46	1330 / 66
Damper OPEN	600 ²⁾	150	32	220 / 9	270 / 14	330 / 21	390 / 30	480 / 45	580 / 66	710 / 99	
		250	32	400 / 7	480 / 10	580 / 15	700 / 22	850 / 32	1020 / 46	1230 / 66	
		315	32	500 / 8	600 / 11	720 / 16	870 / 23	1040 / 33	1250 / 47	1500 / 68	
800 ²⁾	200	56	370 / 9	450 / 13	550 / 19	660 / 27	800 / 40	970 / 59	1180 / 88		
	315	56	600 / 6	720 / 9	870 / 14	1040 / 19	1260 / 28	1510 / 41	1810 / 59		
	355	56	670 / 7	800 / 9	960 / 13	1150 / 19	1380 / 28	1650 / 40	1980 / 57		
In addition, note the minimum volume flow rates! → see page 15	800 ²⁾	200	64	380 / 9	460 / 13	550 / 18	670 / 27	810 / 40	980 / 59	1180 / 85	
		315	64	650 / 6	780 / 9	940 / 13	1130 / 19	1350 / 28	1630 / 40	1950 / 58	
		355	64	730 / 6	870 / 9	1050 / 13	1260 / 19	1510 / 27	1810 / 39	2170 / 56	
Exhaust air DXQ0	325	100	8	80 / 8	100 / 13	130 / 22	160 / 33	190 / 46	230 / 68	280 / 100	
		160	8	130 / 10	160 / 15	190 / 21	240 / 33	290 / 48	350 / 70	430 / 106	
		200	8	160 / 10	190 / 14	230 / 21	280 / 31	340 / 46	420 / 70	510 / 103	
	400	125	16	130 / 8	160 / 12	200 / 20	240 / 28	290 / 41	360 / 63	440 / 94	
		200	16	250 / 8	310 / 12	370 / 17	450 / 26	550 / 38	670 / 57	820 / 85	
		224	16	290 / 8	350 / 11	430 / 17	520 / 25	630 / 37	770 / 55	930 / 80	
	without air deflection blades	500	150	24	190 / 9	230 / 13	280 / 19	340 / 28	410 / 40	500 / 59	610 / 89
			200	24	290 / 8	360 / 13	440 / 19	530 / 28	640 / 40	780 / 60	950 / 88
			280	24	470 / 8	570 / 12	690 / 17	840 / 25	1010 / 37	1230 / 54	1480 / 79
	plenum box K1-D	600 ²⁾	150	32	200 / 8	240 / 12	300 / 19	360 / 27	440 / 41	540 / 62	650 / 89
			250	32	460 / 8	560 / 12	670 / 17	820 / 25	990 / 36	1200 / 53	1450 / 78
			315	32	630 / 7	760 / 10	920 / 14	1110 / 21	1330 / 30	1610 / 44	1940 / 64
	without air deflector plate	800 ²⁾	200	64	350 / 8	420 / 12	510 / 17	620 / 25	760 / 38	920 / 55	1120 / 82
			315	64	710 / 7	850 / 10	1030 / 14	1240 / 20	1500 / 30	1810 / 43	2180 / 63
			355	64	830 / 6	1000 / 9	1200 / 13	1440 / 18	1730 / 26	2090 / 38	2510 / 55

Standard connecting pieces of plenum boxes K1 are in bold.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffuser

Quick selection DXQ1

Volume flow [m³/h] / pressure drop [Pa]

Number of blades ¹⁾	Connecting piece size DN	Plenum box size	Sound power level [dB(A)]						
			20	25	30	35	40	45	50
Supply air DXQ1	325	100 8	90 / 13	110 / 19	130 / 26	160 / 40	190 / 56	230 / 83	280 / 122
		160 8	100 / 8	130 / 13	150 / 17	190 / 28	220 / 38	270 / 57	330 / 85
		200 8	110 / 8	130 / 11	160 / 17	200 / 27	240 / 9	290 / 57	350 / 83
with air deflection blades	400	125 16	140 / 10	170 / 15	210 / 23	250 / 32	310 / 49	370 / 70	450 / 103
		200 16	200 / 7	240 / 10	300 / 16	360 / 23	430 / 33	520 / 49	630 / 72
		224 16	220 / 8	260 / 11	320 / 16	380 / 23	460 / 33	560 / 49	680 / 73
plenum box K1-DL	500	150 28	200 / 9	240 / 13	300 / 20	360 / 29	440 / 43	530 / 63	640 / 91
		200 28	270 / 7	330 / 11	400 / 16	480 / 22	580 / 33	700 / 48	850 / 71
		280 28	360 / 7	440 / 10	530 / 15	630 / 21	760 / 31	920 / 45	1110 / 66
with air deflector plate Damper OPEN	600 ²⁾	150 44	210 / 8	260 / 13	310 / 18	380 / 27	460 / 40	560 / 59	680 / 88
		250 44	420 / 7	500 / 10	610 / 14	730 / 21	880 / 30	1070 / 45	1290 / 65
		315 44	540 / 7	640 / 10	770 / 15	930 / 22	1120 / 31	1340 / 45	1610 / 65
In addition, note the minimum volume flow rates! → see page 15	800 ²⁾	200 84	370 / 8	450 / 12	550 / 18	660 / 26	800 / 39	970 / 57	1170 / 83
		315 84	670 / 6	800 / 9	960 / 13	1150 / 19	1390 / 28	1670 / 40	2000 / 57
		355 84	750 / 6	900 / 9	1080 / 13	1300 / 18	1560 / 27	1870 / 38	2240 / 55
Exhaust air DXQ1	325	100 8	90 / 10	100 / 12	130 / 20	160 / 31	190 / 43	230 / 64	280 / 94
		160 8	150 / 10	180 / 14	220 / 21	260 / 30	320 / 45	390 / 67	470 / 97
		200 8	180 / 9	220 / 13	270 / 20	330 / 30	400 / 44	480 / 64	580 / 93
without air deflection blades	400	125 16	140 / 9	160 / 12	200 / 18	250 / 29	300 / 42	360 / 60	440 / 89
		200 16	270 / 8	330 / 12	400 / 18	480 / 26	580 / 38	710 / 57	860 / 83
		224 16	310 / 8	380 / 12	460 / 17	560 / 25	680 / 37	820 / 54	990 / 79
with plenum box K1-D	500	150 28	190 / 8	230 / 12	280 / 18	350 / 27	420 / 39	510 / 58	620 / 86
		200 28	320 / 9	380 / 12	470 / 19	570 / 28	690 / 40	830 / 58	1010 / 86
		280 28	530 / 8	650 / 12	780 / 17	940 / 25	1140 / 36	1370 / 52	1650 / 76
without air deflector plate Damper OPEN	600 ²⁾	150 44	200 / 8	240 / 12	300 / 19	360 / 27	440 / 41	530 / 59	650 / 89
		250 44	470 / 7	570 / 11	690 / 16	840 / 23	1010 / 34	1230 / 50	1480 / 73
		315 44	660 / 6	800 / 9	960 / 13	1160 / 19	1390 / 28	1680 / 41	2020 / 59
800 ²⁾	200 84	350 / 8	420 / 12	510 / 17	620 / 26	750 / 37	910 / 55	1110 / 82	
	315 84	730 / 7	880 / 10	1060 / 14	1280 / 21	1540 / 30	1850 / 44	2230 / 64	
	355 84	860 / 6	1040 / 9	1250 / 13	1500 / 19	1800 / 27	2160 / 39	2600 / 56	

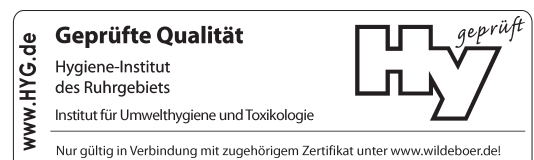
Standard connecting pieces of plenum boxes K1 are in bold.

¹⁾ Number of blades with supply air or number of slots with exhaust air.

²⁾ Plenum box sizes 600 and 800 are for swirl diffusers and exhaust air diffusers with nominal sizes 600 and 625 (hole pattern 600) or for 800 and 825 (hole pattern 800).

DX swirl diffusers

- satisfy the **hygiene requirements** according to **VDI 6022 - 1**, **VDI 3803-1**, **DIN 1946 - 4** and **DIN EN13779**.
- are **resistant to microbes**, and therefore **do not promote the growth of micro-organisms (fungi, bacteria)**. This reduces the risk of infection for people and also the necessary cleaning and disinfection work!
- are **resistant to cleaning agents and disinfectants** and are suitable for use in hospitals and similar facilities!

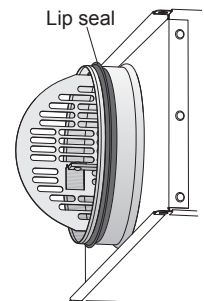


DX swirl diffuser

Order information

		DX		
Front plate:				
square	Q0		Connecting piece	LD with lip seal
	Q1			
circular	R0		Plenum box design	VK galvanised
⇒ see also page 3				KL²⁾ outside in RAL
				SK black inside and outside
Nominal size	325		Built-in components	D with damper
	400			L with air deflector plate
	500			DL with damper and air deflector plate
	600			
	625¹⁾		Connecting piece size DN...	⇒ see pages 4 and 5
	800			
	825¹⁾		plenum box	
Hole pattern (plenum box size)	325		square	K1 one lateral connecting piece
	400			K2 two lateral connecting pieces
	500			K3 top connecting piece
	600		circular	
	800			R1 one lateral connecting piece
Colour				R3 top connecting piece
Front plate RAL 9010				
Cap RAL 9010	ST⁴⁾			
Front plate RAL				
Cap RAL 9017 (black)	FL²⁾			
Front plate RAL				
Cap accordingly	FS²⁾			
Air guide				
Supply air				
• with black blades	ML			
• with white blades ⁵⁾	WL			
Exhaust air (without blades)	OL			
Number of blades³⁾				
Hole pattern 500	20			
Hole pattern 500, 600	24			
Hole pattern 600	28			
Hole pattern 600	32			
Hole pattern 800	56			
Hole pattern 800	64			

connecting piece with lip seal



¹⁾ only with square front plate
²⁾ specify in addition to RAL colour
³⁾ only for DXQ0 and DXR0 from nominal size 500
⁴⁾ standard colour
⁵⁾ similar to RAL 9010

NOTE concerning colours

Colour variations should never be totally avoided for technical reasons; this is particularly the case for colours RAL 9006 (white aluminium) and RAL 9007 (grey aluminium). A special colour matching is advisable in particular instances, and in conjunction with surrounding colours, for example, suspended ceilings!

Ordering example: DXQ0 - 625 - 600 - ST - ML - 32 - K1 - 250 - DL - VK - LD

DX swirl diffuser

Specification text

SUPPLY AIR

DX swirl diffuser for constant and variable volume flow rates. With novel air deflection blades which have progressively twisted profile for large volume flow rates with low flow noise. With high induction for reducing flow velocities and temperature differentials during heating and during room cooling up to -12 K using radial and axially symmetrical air distribution. Centrally slotted square front plate with square / circular hole pattern or circular front plate with circular hole pattern made of galvanised sheet steel with air deflection blades which can be repositioned from the front side and are made of plastic. With concealed central fastening or additionally with concealed screws in outer corners. With resistant, colour-fast, anti-static polyester coating, smooth glossy in colour RAL 9010 (white) or in RAL special colour. Air deflection blades black / white.

EXHAUST AIR

DX Exhaust air diffuser, visually like the swirl diffuser for supply air, but without air deflection blades. Centrally slotted square front plate with square / circular hole pattern or circular front plate with circular hole pattern made of galvanised sheet steel. With concealed central fastening or additionally with concealed screws in outer corners. With resistant, colour-fast, anti-static polyester coating, smooth glossy in colour RAL 9010 (white) or in RAL special colour.

Certificate of conformity as proof of compliance with the hygiene requirements according to VDI 6022-1, VDI 3803-1, DIN 1946-4 and DIN EN 13779.

Plenum box with central fastening, made of galvanised sheet steel with holes for suspensions with

- special air deflector plate, in particular for supply air for optimum air distribution with low flow noises
- with powder coating on inside and outside
- in RAL special colour on outside
- one lateral connecting piece
- two lateral connecting pieces
- top connecting piece
- Lip seal(s)
- Damper for adjusting volume flow without dismantling the air diffuser

Installation in closed ceilings systems, grid ceilings and freely suspended.

.....

Units

Volume flow:	.....	m³/h
Pressure drop:	.....	Pa
Sound power level	.....	dB(A)
Manufacturer:	WILDEBOER®	
Type:	DX	
Nominal size:	.....
Hole pattern:	.....
Colour of swirl diffuser:	RAL.....	
Number of blades:	.....
Colour of blades:	Black / white	
Connecting piece size DN:	.....	mm
Colour of plenum box:	RAL.....	

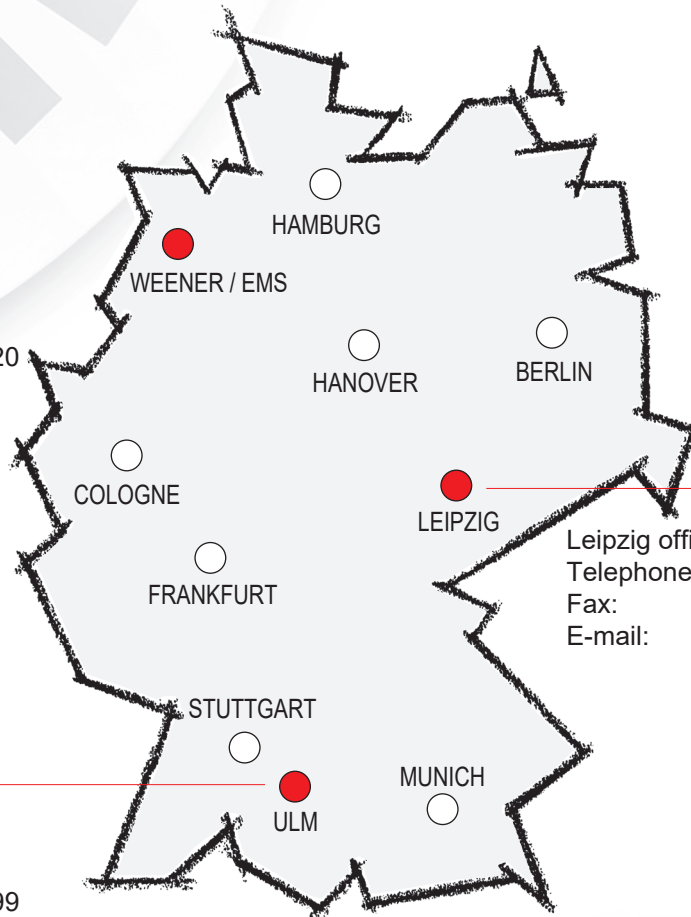
complete with fixings	deliver:	.....
	install:	.....

Select texts not highlighted in bold as required!

INNOVATIVE · PRACTICAL · ECONOMICAL

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TAKE ADVANTAGE OF OUR STRENGTHS

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QUALITY PRODUCTS

air distribution fire protection noise protection