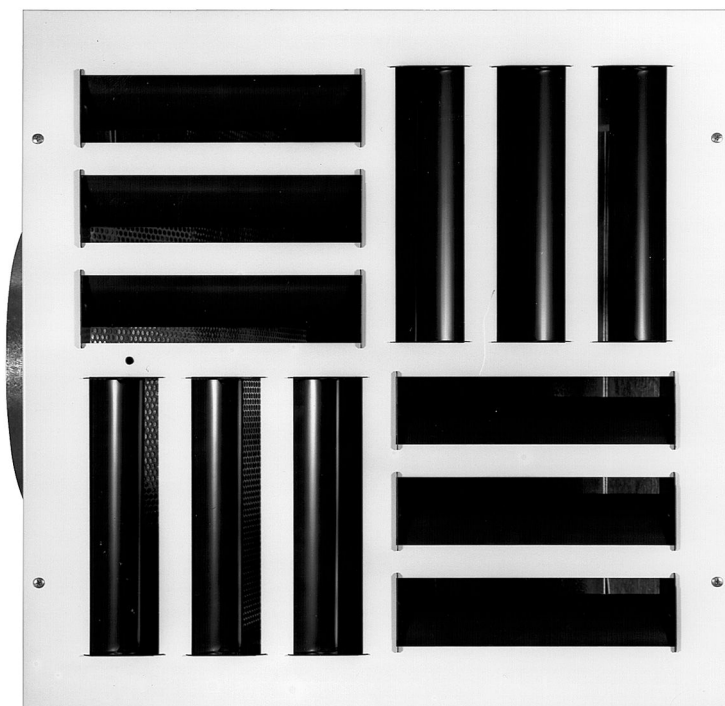




Ceiling Diffuser

DQC



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Ceiling Diffuser Model DQC

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Ceiling Diffuser Model DQC

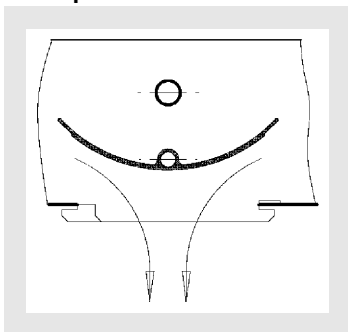
Description

In ventilation and air-conditioning of production halls, increased demands are made on the room air flow. In cooling mode, there should not be a draught in the occupied zone, and, in heating mode, high rooms should also be heated up quickly.

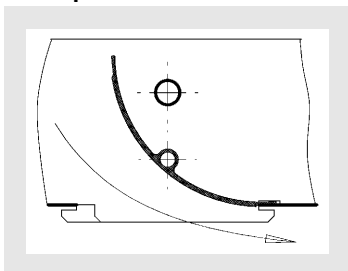
Such supply air problems can only be solved by using motor adjustable diffusers. This is why the ceiling diffuser type DQC was developed. It is suitable for room heights ≥ 4.5 m.

For mounting in the ceiling, inspection openings for the electrical connection must be provided on-site in sufficient number and size.

Blade position 1



Blade position 2



Construction

Plenum box

- galvanised sheet steel

Faceplate

- sheet steel painted to the RAL colour 9010 (white)

Air deflection blades

- plastic in the RAL colour 9005 (black)

Model

DQC-Z

- with air deflection blades

DQC-A

- without air deflection blades, box inside painted to RAL 9005 (black)

DQC-Z-E

- additionally with electric actuator 24V / 50Hz. 0...10V

Accessories

Plenum box (-ASK-A-H)

- with horizontal connection piece

Plenum box (-ASK-A-V)

- with vertical connection piece

Plenum box (-ASK-Z-H)

- with horizontal connection piece and integrated perforated straightener

Plenum box (-ASK-Z-V)

- with vertical connection piece and integrated air diffuser plate

Ball-impact guard (-BS) (for sizes 600 and 625 only)

- Steel painted to RAL 9010 (white), other RAL colours possible at an extra charge.

Rubber lip seal (-GD)

- Special rubber

Throttle damper (-DK)

- made of galvanised sheet steel
- with plastic fixing

Internal insulation (-li)

- Thermal insulation inside the plenum box

External insulation (-la)

- with thermal insulation on the outside of the plenum box

Fastening

Screw mounting (-SM)

- Standard, with raised countersunk head tapping screws (on-site)

Concealed mounting (-VM)

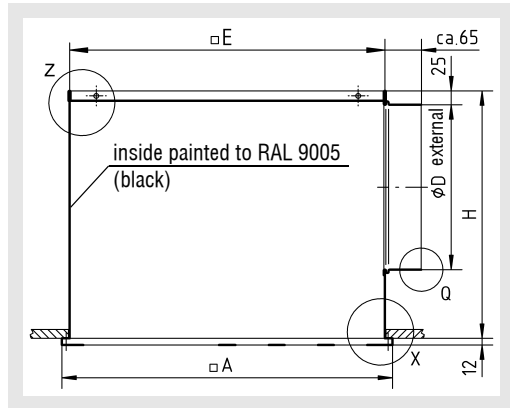
- not possible!

Ceiling Diffuser Model DQC

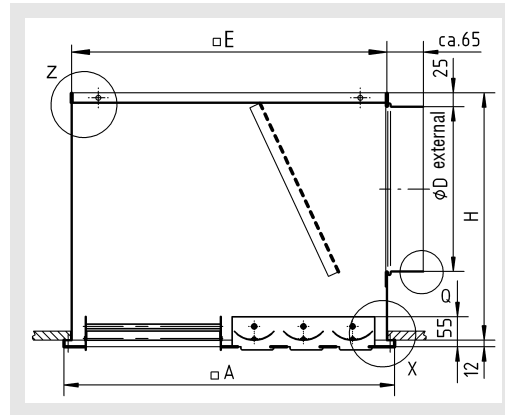
Models and dimensions

Dimensions

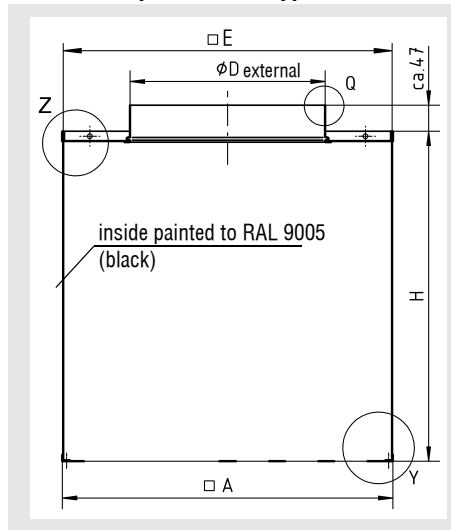
DQC-A with plenum box type ASK-A-H



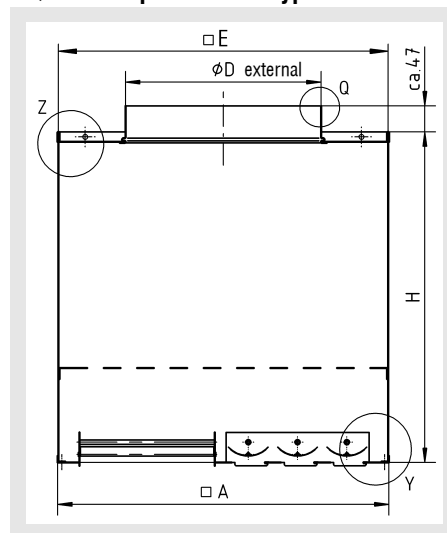
DQC-Z with plenum box type ASK-Z-H



DQC-A with plenum box type ASK-A-V



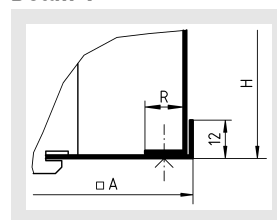
DQC-Z with plenum box type ASK-Z-V



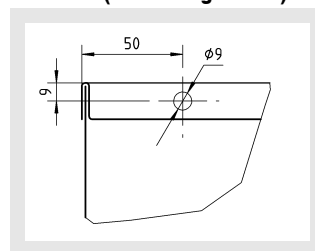
Available sizes

Size	□A	ASK	□E	H	øD	R
600	598	H	570	447	298	12
		V	595	597	353	12
625	623	H	570	447	298	24
		V	620	597	353	24
800	798	H	770	647	498	12
		V	795	647	498	12

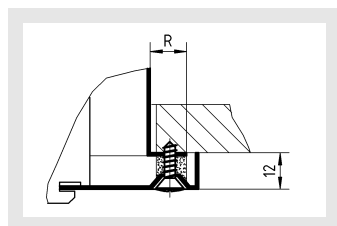
Detail Y



Detail Z (mounting holes)



Detail X

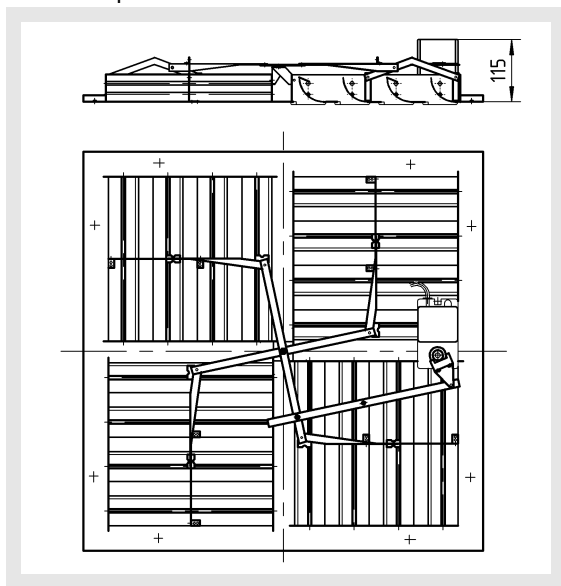


Ceiling Diffuser Model DQC

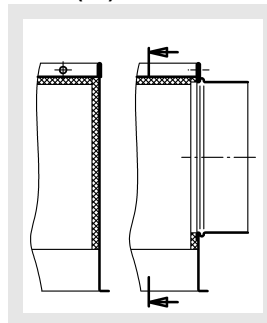
DQC-Z-E (electric actuator)

24 V AC, 0...10 V activation

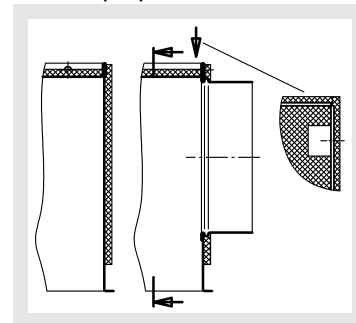
Activation possible via AGV-2



**Insulation for ASK
inside(-li)**

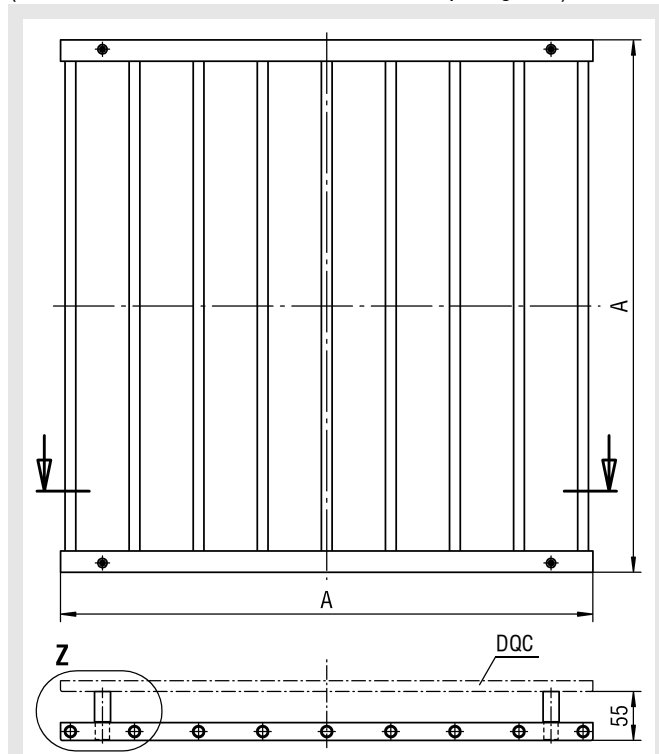


outside (-la)



Ball-impact guard (-BS, for sizes 600, 625 only, size 800 on request)

(model DQC-Z-E not available with ball-impact guard)

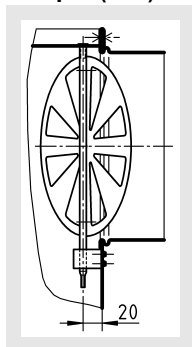


Technical data (for -E)

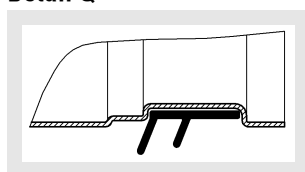
Supply voltage	24V AC 50/60 Hz
Power consumption	1.3 W in operation, 0.5 W in idle position
Dimensioning	3 VA
angle of rotation	max. 95° (adjustable, mechanical end stops)
Protection type	IP 54 (cable routing at the bottom)
Protection class:	III (safety low voltage)
Ambient temperature	-20...+50°C
Maintenance	maintenance-free

Dimensions of accessories

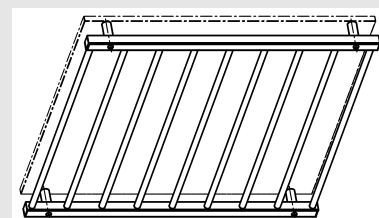
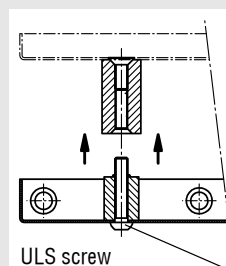
Damper (-DK)



**Rubber lip seal (-GD)
Detail Q**



Detail Z



Available sizes

NW	□ A
600	598
625	623

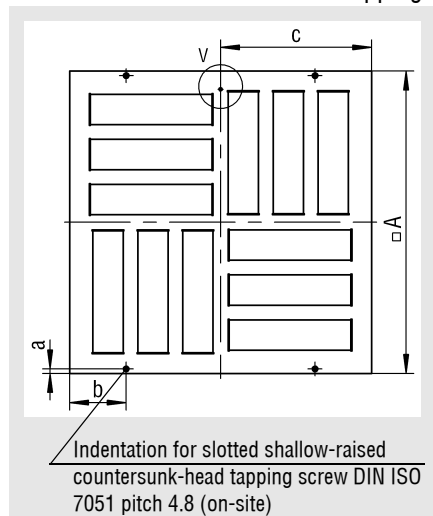
Ceiling Diffuser Model DQC

Fastening methods

Screw mounting (-SM)

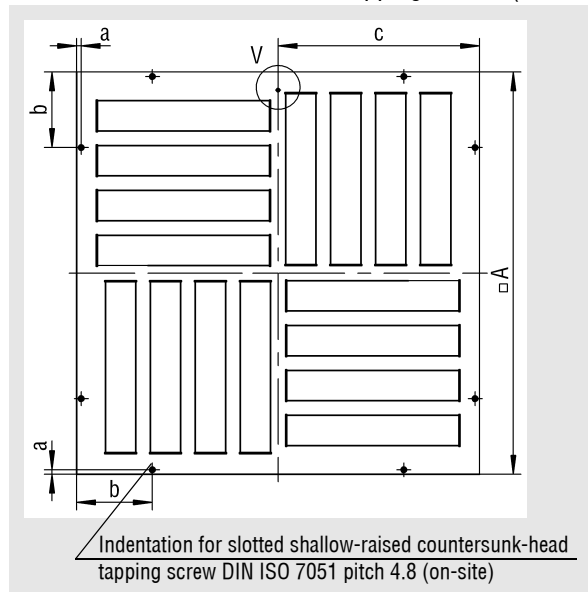
Size 600/625

with 4 raised countersunk head tapping screws (on-site)



Size 800

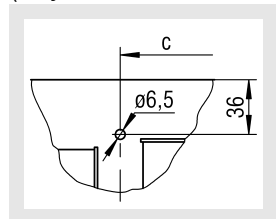
with 8 raised countersunk head tapping screws (on-site)



Detail V

Hole for the damper adjustment

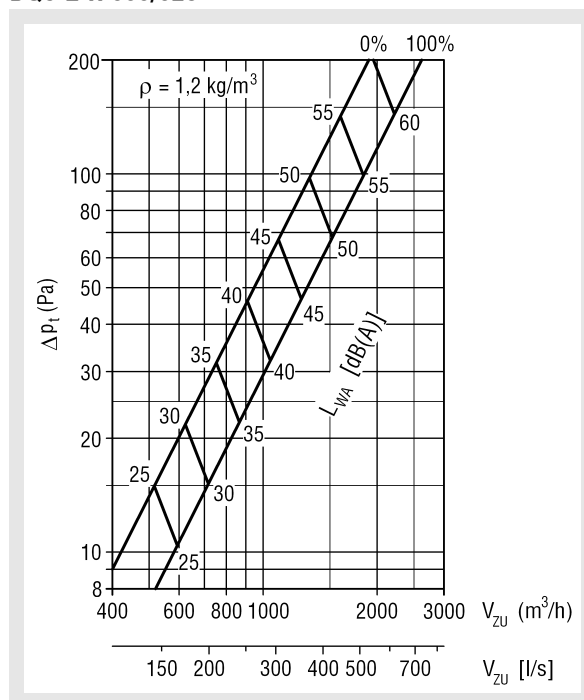
(only available for the version with damper)



Size	□A	a	b	c
600	598	9	80	304
625	623	21,5	80	316,5
800	798	9	150	404

Pressure loss and noise level

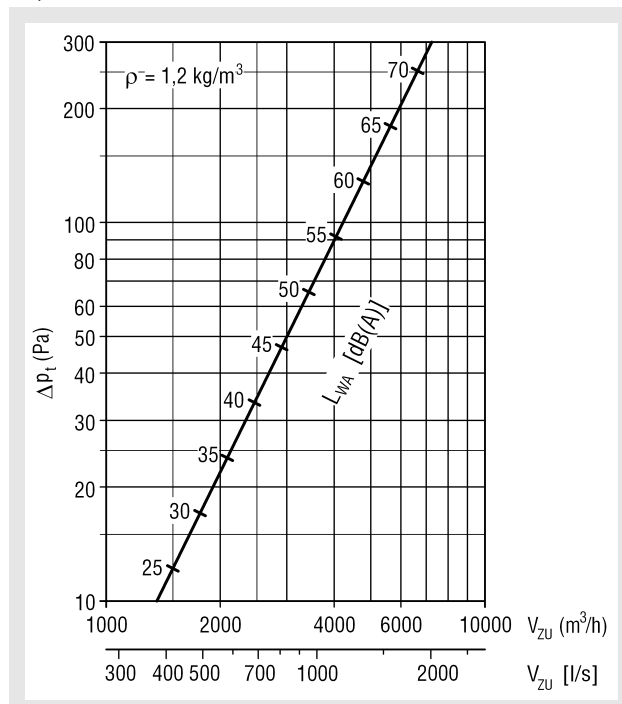
DQC-Z-H 600/625



0% = Damper "CLOSED"

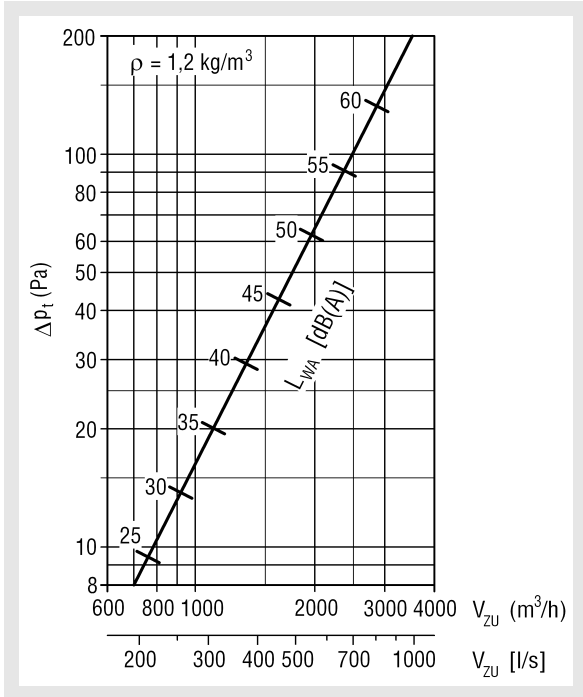
100% = Damper "OPEN"

DQC-Z-H 800



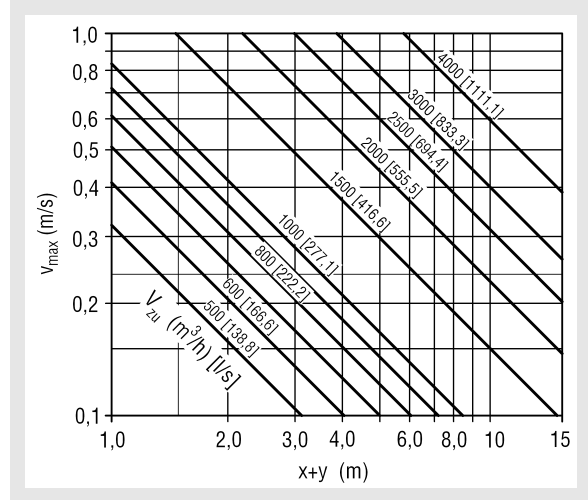
Ceiling Diffuser Model DQC

DQC-Z-V 600/625



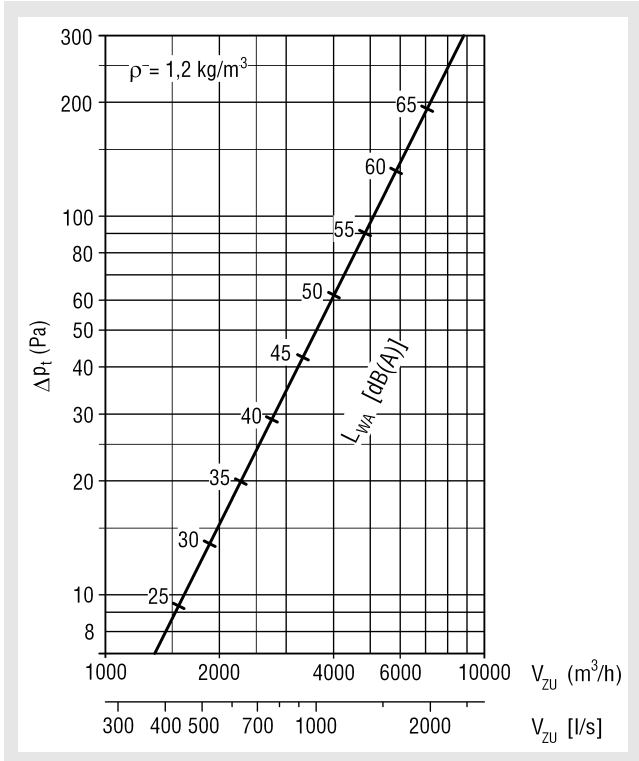
Maximum end velocity of jet

DQC-Z 600/625 (without coanda effect)

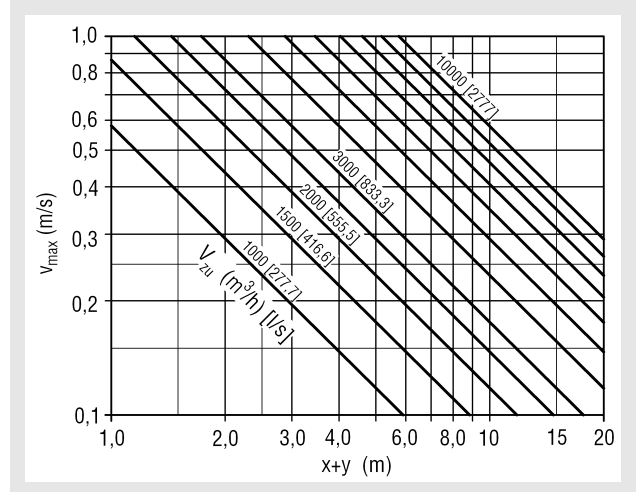


with coanda effect:
- diagram value x 1.41

DQC-Z-V 800



DQC-Z 800 (without coanda effect)

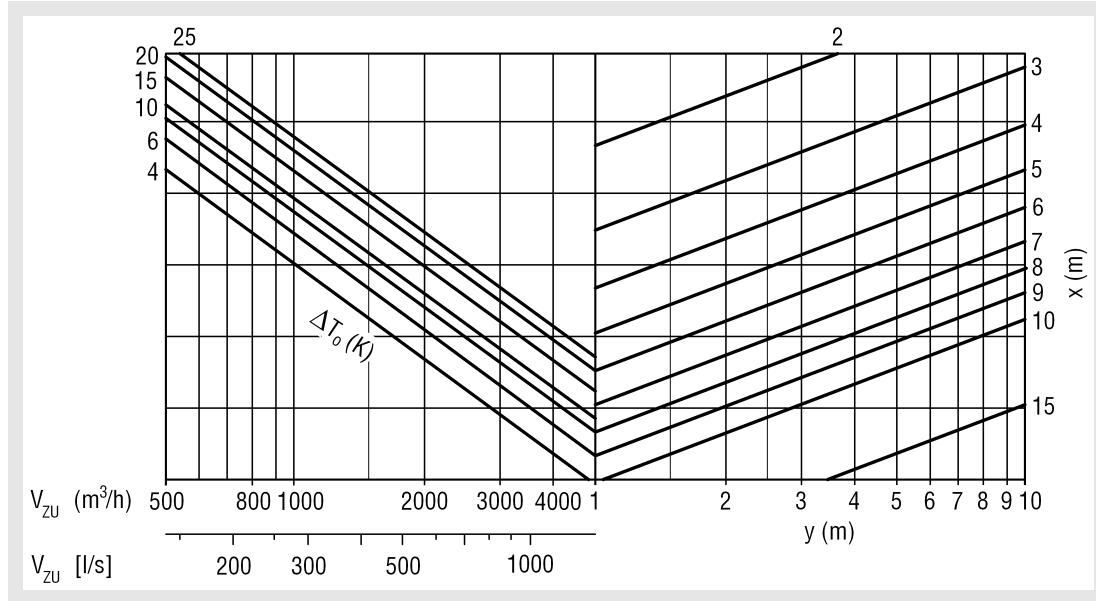


with coanda effect:
- diagram value x 1.41

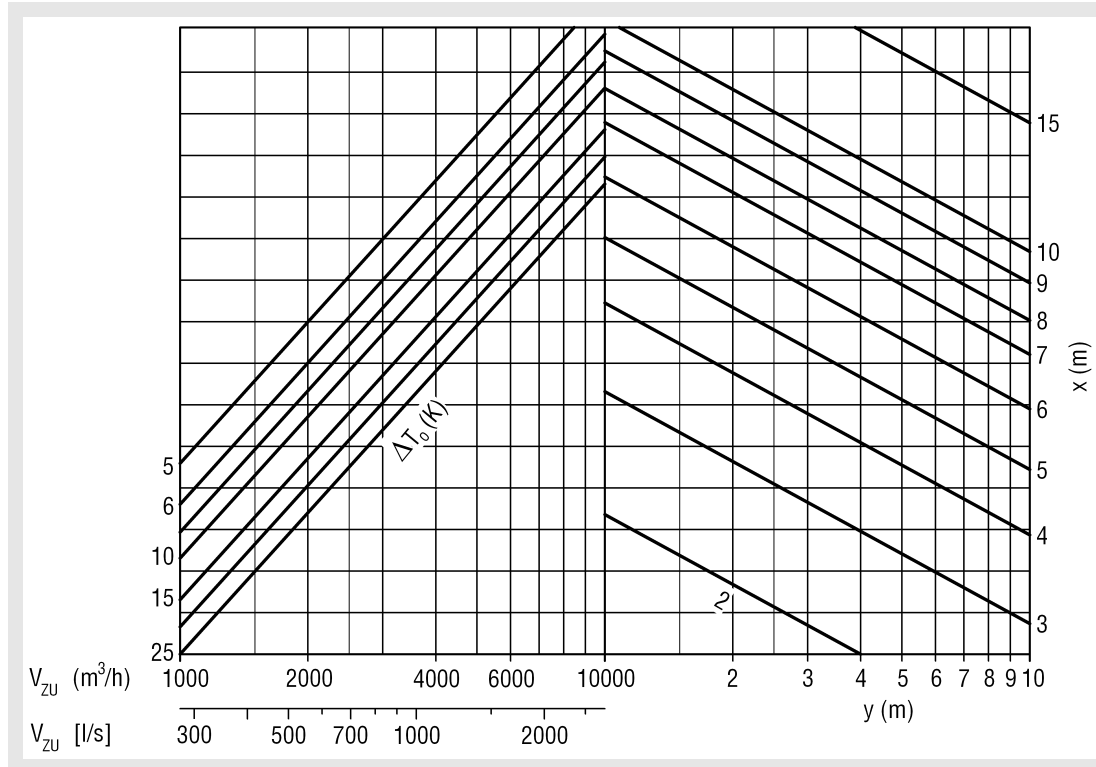
Ceiling Diffuser Model DQC

Jet path

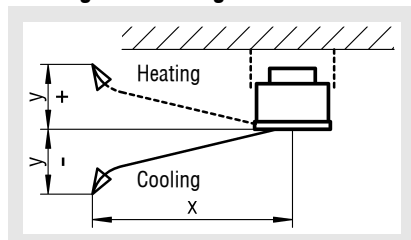
DQC-Z 600/625



DQC-Z 800

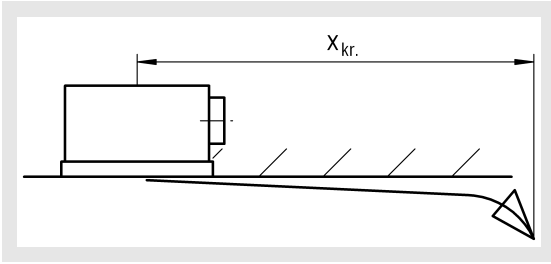


Heating and cooling modes

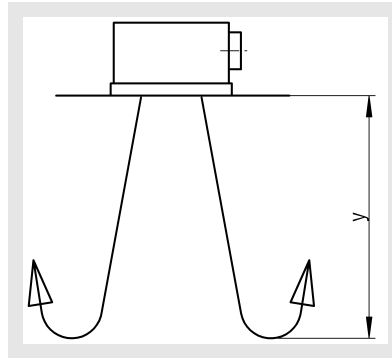


Ceiling Diffuser Model DQC

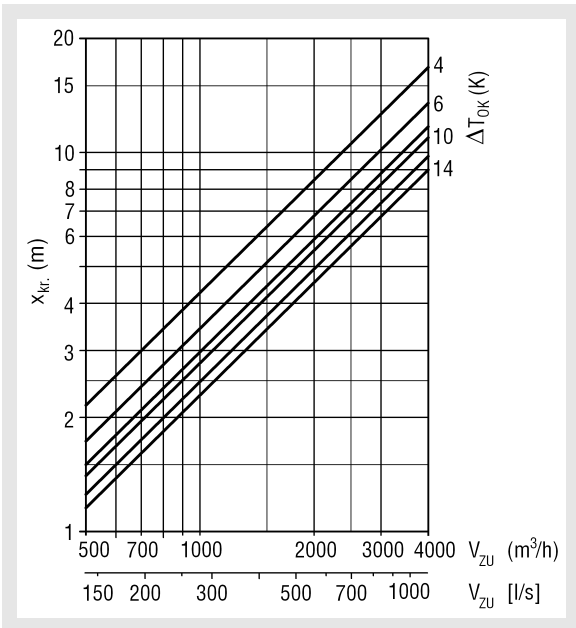
Critical throw



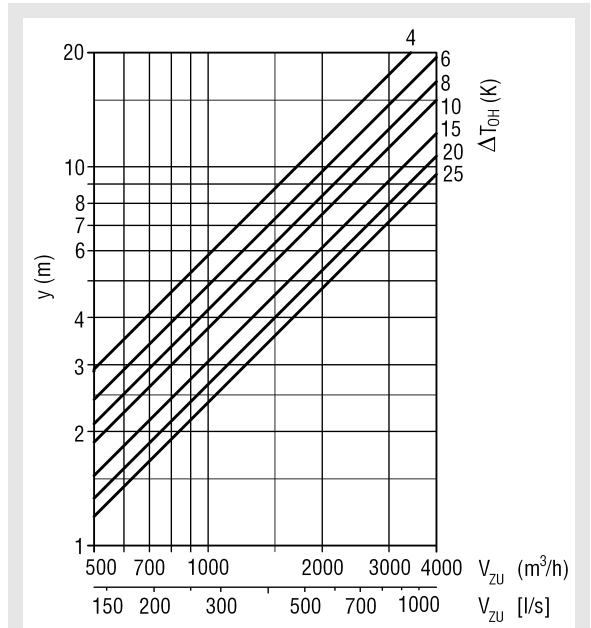
Maximum penetration



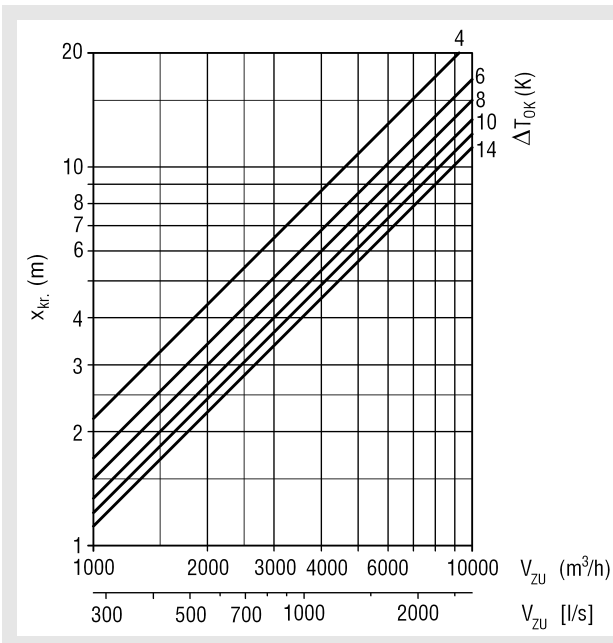
DQC-Z 600/625



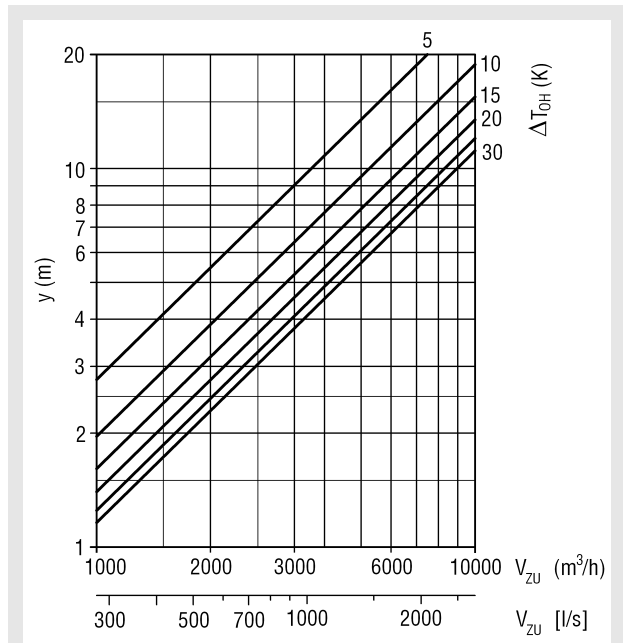
DQC-Z 600/625



DQC-Z 800



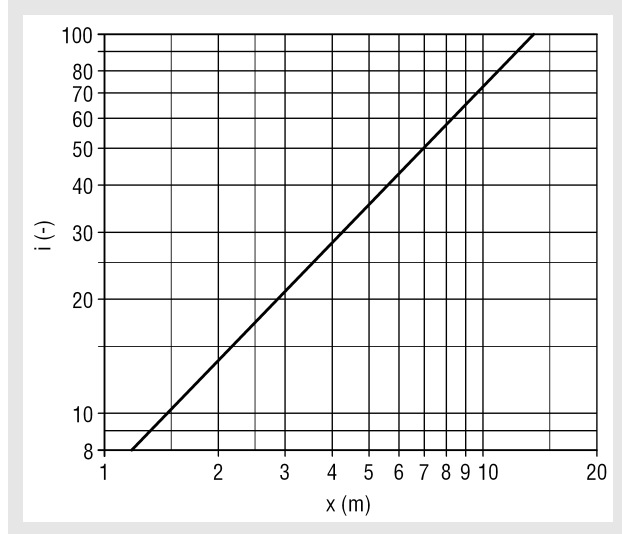
DQC-Z 800



Ceiling Diffuser Model DQC

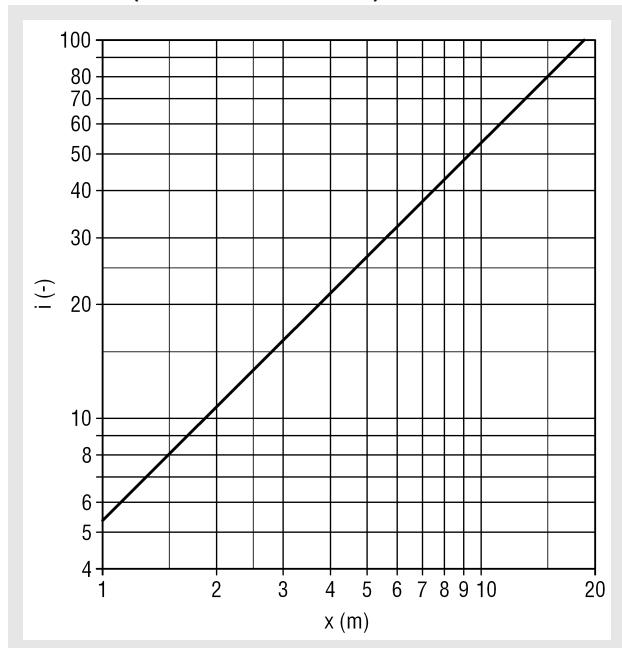
Induction ratio

DQC-Z 600/625 (without coanda effect)



with coanda effect:
- diagram value x 0.71

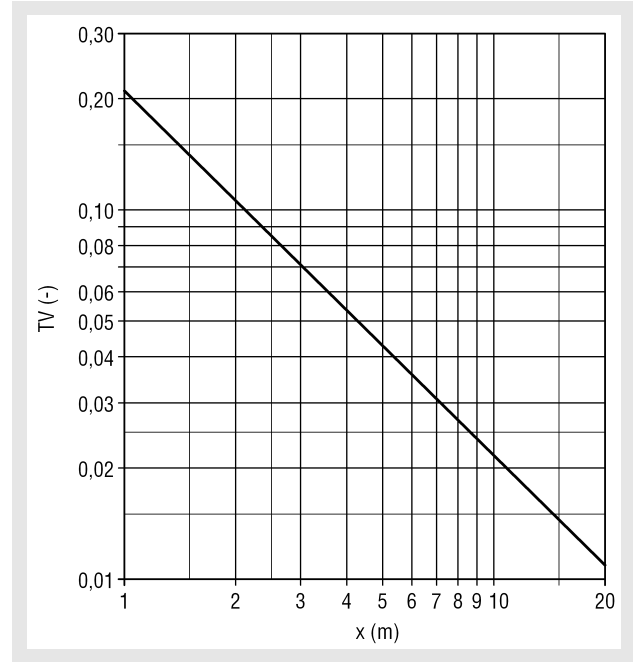
DQC-Z 800 (without coanda effect)



with coanda effect:
- diagram value x 0.71

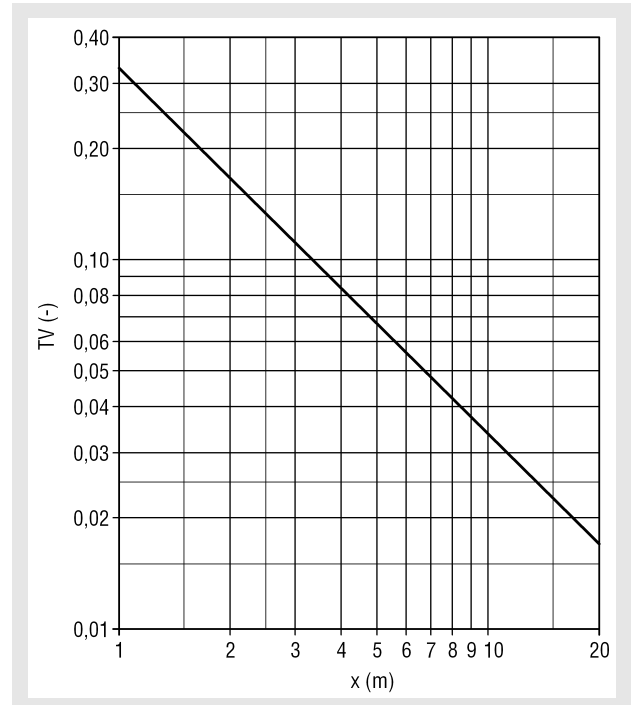
Temperature ratio

DQC-Z 600/625 (without coanda effect)



with coanda effect:
- diagram value x 1.41

DQC-Z 800 (without coanda effect)



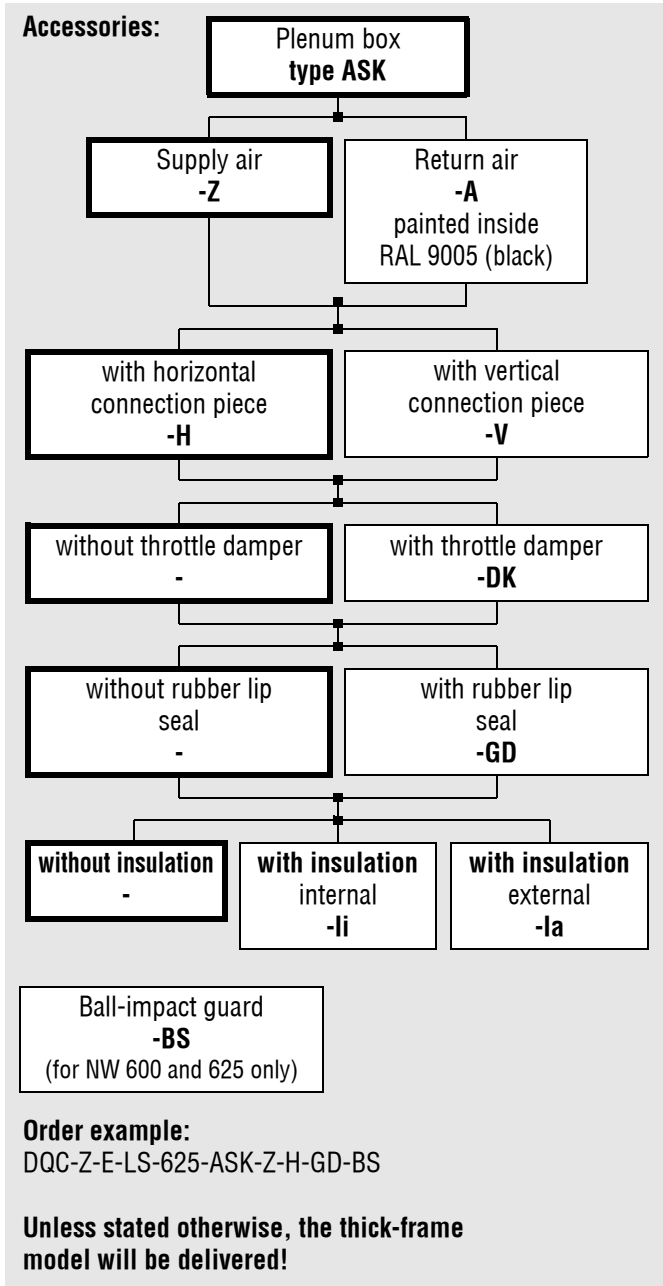
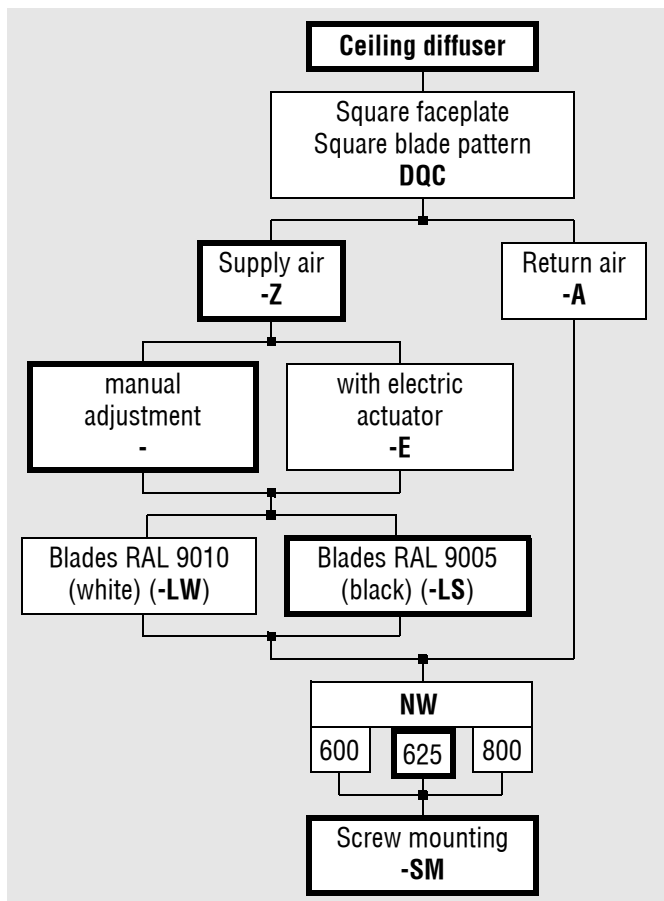
with coanda effect:
- diagram value x 1.41

Ceiling Diffuser Model DQC

Legend

- V_{ZU} (m³/h) [l/s] = Supply air volume
- V_X (m³/h) [l/s] = total air jet volume at point x
- v_{max} (m/s) = Maximum end velocity of jet
- x (m) = horizontal throw
- y (m) = vertical throw
- $x+y$ (m) = horizontal + vertical throw
- i (-) = Induction ratio ($i = V_X / V_{ZU}$)
- TV (-) = Temperature ratio ($TV = \Delta T_X / \Delta T_0$)
- NW (mm) = Nominal value
- x_{kr} (m) = Critical throw
- ΔT_0 (K) = Temperature difference between supply air temperature and room temperature ($\Delta T_0 = t_{ZU} - t_R$)
- ΔT_X (K) = Temperature difference at point x
- t_{ZU} (°C) = Supply air temperature
- t_R (°C) = Room temperature
- Δp_t (Pa) = Pressure loss
- ρ (kg/m³) = Density
- L_{WA} [dB(A)] = A-weighted sound power level
- ΔT_{OH} = Temperature difference between air supply and room temperature in heating mode
- ΔT_{OK} = Temperature difference between supply air and temperature and room temperature in cooling mode

Order details



Ceiling Diffuser Model DQC

Specification texts

Ceiling diffuser type DQC-Z for supply air consists of a square faceplate, RAL colour 9010 (white) with visible screw mounting (SM), including four lamella fields each arranged offset by 90°. The air deflection plastic blades painted in RAL 9005 (black) are manually individually adjustable.

Product: SCHAKO **type DQC-Z**

Ceiling diffuser type DQC-A for exhaust air consists of a square front plate painted in RAL 9010 (white), with visible screw mounting (SM), including four lamella fields each arranged offset by 90°, excluding air deflection blades

Product: SCHAKO **type DQC-A**

Ceiling diffuser type DQC-Z-E for supply air consists of a square front plate painted in RAL 9010 (white), with visible screw mounting (SM), including four lamella fields each arranged offset by 90°. The air deflection plastic blades painted in RAL 9005 (black) are adjustable with an electrical servomotor at the same time.

Rated voltage: AC 24V 50/60 Hz

Actuator signal DC 0...10 V

Manufacturer: SCHAKO **Typ DQC-Z-E**

Accessories:

- Plenum box (-ASK-Z-H, for DQC-Z), made of galvanised sheet steel with fixing lugs, with horizontal connection piece and integrated perforated straightener.
 - with throttle damper (-DK) in the connection piece for air volume regulation.
 - with rubber lip seal (-GD) at the connection piece
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Plenum box (-ASK-Z-V, for DQC-Z) made of galvanised sheet steel, with fixing lugs, with vertical connection pipe and with integrated perforated straightener
 - with throttle damper (-DK) in the connection piece for air volume regulation.
 - with rubber lip seal (-GD) at the connection piece
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Plenum box (-ASK-A-H, for DQC-A) made of galvanised sheet steel, with fixing lugs, with horizontal connection pipe, inside painted to RAL 9005 (black)
 - with throttle damper (-DK) in the connection piece for air volume regulation.
 - with rubber lip seal (-GD) at the connection piece
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Plenum box (-ASK-A-V, for DQC-A) made of galvanised sheet steel, with fixing lugs, with vertical connection piece, painted on the inside to RAL 9005 (black).
 - with throttle damper (-DK) in the connection piece for air volume regulation.
 - with rubber lip seal (-GD) at the connection piece
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Ball-impact guard (-BS), made of steel painted to RAL 9010 (white), other RAL colours possible at an extra charge (for NW 600 and 625 only).