



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

## KZ SERIES

### OVERVIEW

Variable geometry high-induction diffusers are a suitable solution for air distribution, especially with very high installations.

Their regulation system is suitable for heating and cooling applications. Indeed the throw optimization can be obtained by the adjustment of finning inclination. The finning regulation can be controlled by servomotor. This characteristic together with the good inductive power and the variety of model enables the diffuser to be used in ventilation system for installation height from 3 to 25 meters, with temperature variation from supplied air and ambient from  $-12^{\circ}$  to  $+30^{\circ}\text{C}$  (depend on the model, air flow and temperature variation). Within this range, KZ diffusers ensure the correct air speed in the occupied area, thus maintaining a steady temperature and preventing any irregular unwanted air currents. Any problems installing the diffusers in false ceiling are solved by the models fitted with a 595x595 panel.

### CHARACTERISTICS AND OPERATION

The KZ series ceiling diffusers are equipped with 6 swivelling fins which allow for high induction.

In this way, the supply air velocity and temperature gradient are quickly reduced to the optimum values for the occupied zone.

KZ diffusers are suitable for application in rooms with high ceilings, the fins configuration can be adjusted in 4 ways (depending on the KZ model):

- manual with mechanism that controls all fins simultaneously
- automatic with on-off actuator
- automatic with proportional actuator
- automatic without power supply via thermostatic spring system.

### APPLICATIONS

The diffuser is designed for civil and industrial applications with any type of mixing ventilation system and must be installed at heights between 3 and 25 meters.

The variable geometry high induction diffuser, by setting the appropriate adjustments according to height, flow rate and temperature gradient, can set flow rates between 200 and 12,000 m<sup>3</sup>/h with temperature gradients varying between  $+30^{\circ}\text{C}$  and  $-11^{\circ}\text{C}$ .

### SELECTION PROGRAM

MP3 has a selection program to identify the ideal product, the best setting, the number and arrangement of diffusers according to room characteristics and required thermal values. For this selection, please contact the Technical Department at: [support.italia@mp3-italia.it](mailto:support.italia@mp3-italia.it)





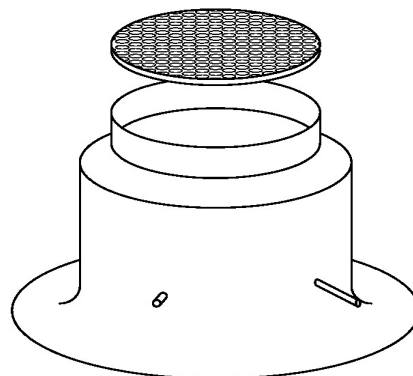
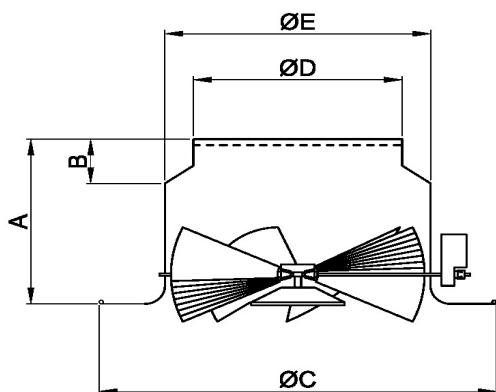
# HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

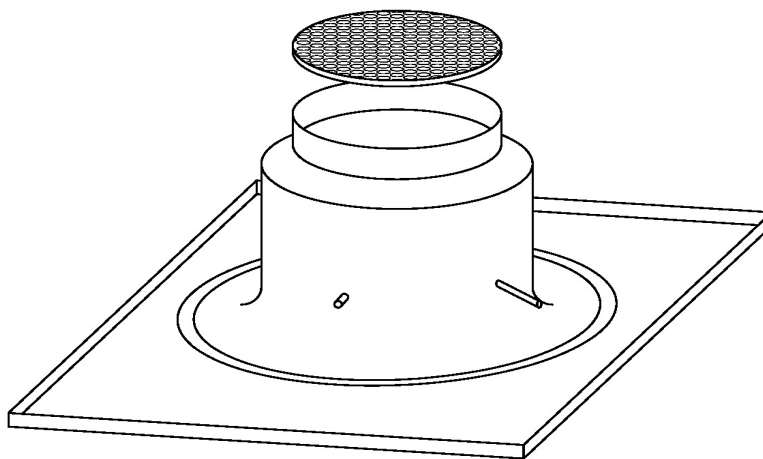
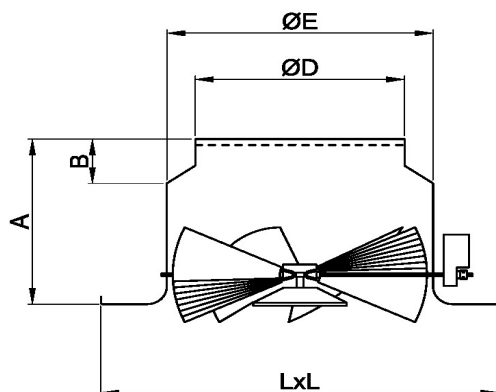
## CONSTRUCTION DIMENSIONS

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#### Standard circular construction



#### Construction with counter ceiling panel



| Nominal diameter | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | L [mm] | [kg] |
|------------------|--------|--------|--------|--------|--------|--------|------|
| 160              | 155    | 65     | 300    | 158    | 198    | 595    | 1,3  |
| 200              | 180    | 60     | 350    | 198    | 248    | 595    | 2,0  |
| 250              | 205    | 70     | 400    | 248    | 298    | 595    | 2,7  |
| 315              | 230    | 70     | 500    | 313    | 398    | 595    | 3,8  |
| 400              | 270    | 105    | 615    | 398    | 465    | =      | 6,3  |
| 500              | 320    | 95     | 780    | 498    | 565    | =      | 8,9  |
| 630              | 390    | 105    | 935    | 628    | 665    | =      | 14,5 |
| 800              | 390    | 0      | 1020   | 798    | 798    | =      | 30,0 |

Note: equalizer optional



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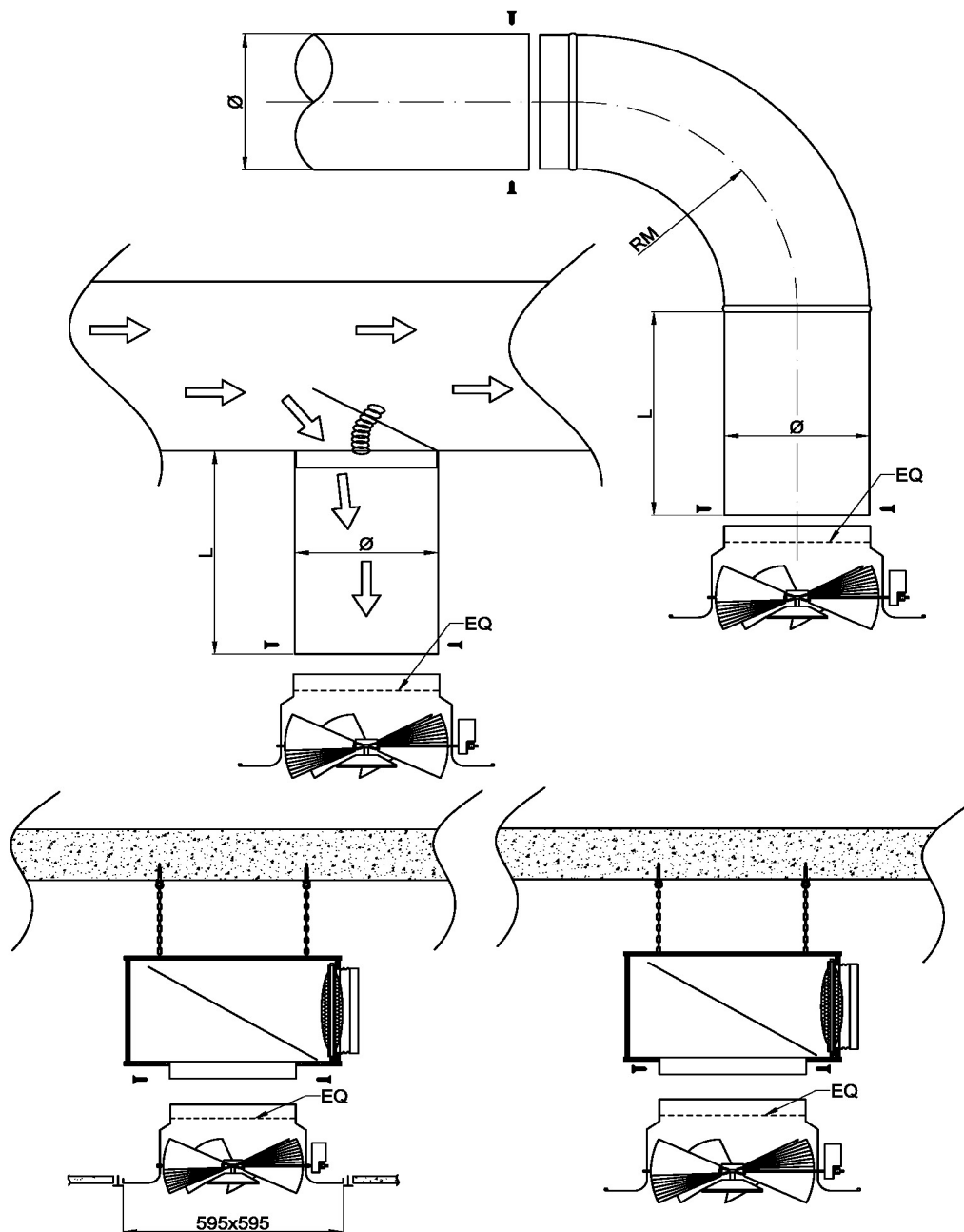
### INSTALLATION EXAMPLE

#### INSTALLATION MODE:

Installation can be done either directly on the duct fitting, side or bottom, or on the plenum fitting, as shown in the diagrams below.

Fixing is by means of side screws directly into the duct or plenum fitting.

In the integrated panel solution, the diffuser replaces the modular ceiling panel



Ø diameter of the diffuser  
L length of the connection  
L minimum =  $1,5 \times \varnothing$

RM medium degree of curvature  
RM minimum =  $\varnothing$   
RM optimum =  $1,5 \times \varnothing$   
EQ equalizer (optional)



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### OPERATIONS

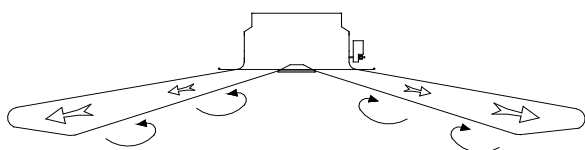
#### OPERATION:

Depending on the setting angle of the fins, different types of air intake are obtained.

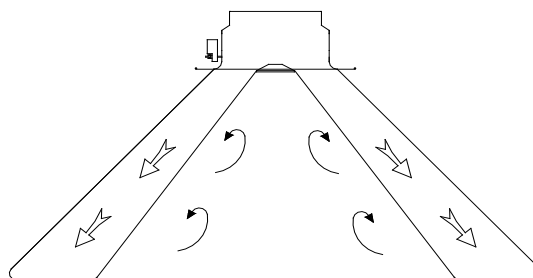
An angle of  $0^\circ$  corresponds to vertical fins.

With flush ceiling installation and fins with an angle greater than  $50^\circ$ , there is the 'coanda effect', i.e. the elongation of the horizontal air throw due to the adhesion of the air vein to the ceiling plane. In these conditions, the horizontal throw is elongated by approximately 40%.

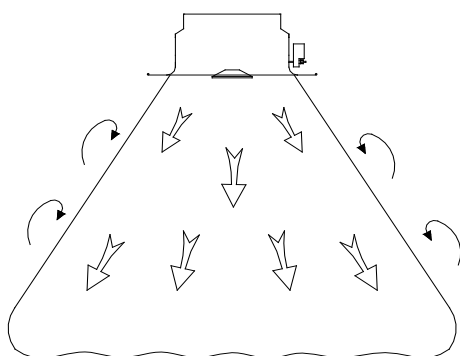
Fins angle:  $67^\circ$   
Immission angle :  $150^\circ$   
Radial throw



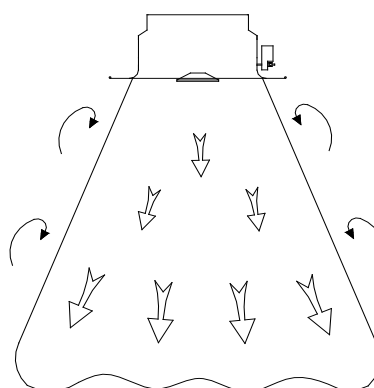
Fins angle:  $45^\circ$   
Immission angle:  $95^\circ$   
Radial/axial throw



Fins angle:  $30^\circ$   
Immission angle:  $50^\circ$   
Axial throw



Fins angle:  $15^\circ$   
Immission angle:  $30^\circ$   
Axial throw





## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

WITH AUTOMATIC REGULATION  
WITH THERMOSTATIC SPRING

KZ-CT  
SERIES

### OVERVIEW:

The KZ-CT series of high induction diffusers use a thermostatic spring with form memory mechanism for the simultaneous inclination of the fins. This systems allows to better obtain an optimum air flow direction in relation to the temperature, in an automatic way.

The supplied air temperature, in fact, determines the dilation or contraction of the thermostatic spring, which in turn determines the simultaneous rotation of the distribution fins reaching the ideal angel on inclination.

By choosing the KZ-CT diffuser, can eliminated:

- electric thermostats
- electric plant
- servomotors.

### CHARACTERISTICS :

The directional fins supply air into the room at a horizontal to vertical directional throw.

In the case of a horizontal air flow, the 6 fins divide the flow in 6 radiant jets and at the same time form a rotary motion around the axis of the diffuser. A helicoidal air flow is therefore had , capable of injecting a large volume of air in the room and mixing it with the injected air.

In the case of a vertical flow, the phenomenon of stratification is eliminated.

The rotation of the fins from the maximum to the minimum angle of inclination corresponds to a range in temperature of the injected air from 16° C to 35° C and occurs in less than 5 minutes.

The maximum and minimum angle can be determined and regulated very simply acting on the two screws with Allen key.

### SELECTION SOFTWARE :

The aeraulic qualities of the KZ-CT are identical to those of the KZ diffusers as they only differ in the way in which the fins are regulated.

The company MP3 makes use of a selection program to identify the best product, the best regulation, the number and arrangement of diffusers on the basis of the room characteristics and of the thermal values required.

Information can be obtained from:

support.italia@mp3-italia.it

### METHOD OF REGULATION :

With the use of the selection program it is possible to determine the most appropriate model of diffuser for each application.

The software also indicates, as output data, the maximum and minimum angles of inclination of the fins for the heating and cooling conditions.

The plate on the side of the diffuser indicates a graduated scale for the inclination of the fins and two slidable blocks fixable in correspondence to the angle indicated by the program for the heating (red zone of the scale) and for the cooling (the blue zone of the scale).

**Diffusers definition**

Room definition

|                                 |      |
|---------------------------------|------|
| Room length (m)                 | 22   |
| Room width (m)                  | 22   |
| Room height (m)                 | 8    |
| Height of occupied zone (m)     | 1.8  |
| Mounting Height (m)             | 8    |
| Acoustic pressure limit (dB(A)) | 35   |
| Surface (m <sup>2</sup> )       | 484  |
| Volume (m <sup>3</sup> )        | 3872 |

Diffuser type and model selection

Model 800 KZE Drawing Picture

Data for calculation

|                                       |      |
|---------------------------------------|------|
| Summer room temperature (°C)          | 26   |
| Winter room temperature (°C)          | 22   |
| Air terminal speed (m/s)              | 0.25 |
| Required air flow (m <sup>3</sup> /h) | 4100 |
| Cooling inlet air temperature (°C)    | 14   |
| Heating inlet air temperature (°C)    | 28   |
| Renovation coefficient (1/h)          | 1.1  |

Calculate in cooling

Results

|                                                  |      |
|--------------------------------------------------|------|
| Number of diffusers                              | 1    |
| Air flow per diffuser (m <sup>3</sup> /h)        | 4100 |
| Minimum suggested distance between diffusers (r) | 5.41 |
| Diffusers blades angle (°)                       | 47.2 |
| Diffuser pressure drop (Pa)                      | 4.9  |

|      |      |      |      |      |      |      |      |       |      |    |
|------|------|------|------|------|------|------|------|-------|------|----|
| Lw   | Lw   | Lw   | Lw   | Lw   | Lw   | Lw   | Lw   | Lw    | NR   | NC |
| 53   | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | dB(A) |      |    |
| 32.8 | 33.4 | 32.5 | 29.3 | 22.9 | <17  | <17  | 29.8 | 25.1  | 23.0 |    |

Calculate in heating

Results

|                                                  |      |
|--------------------------------------------------|------|
| Number of diffusers                              | 1    |
| Air flow per diffuser (m <sup>3</sup> /h)        | 4100 |
| Minimum suggested distance between diffusers (r) | 5.41 |
| Diffusers blades angle (°)                       | 19.2 |
| Diffuser pressure drop (Pa)                      | 2.2  |

|      |      |      |     |      |      |      |      |       |     |     |
|------|------|------|-----|------|------|------|------|-------|-----|-----|
| Lw   | Lw   | Lw   | Lw  | Lw   | Lw   | Lw   | Lw   | Lw    | NR  | NC  |
| 53   | 125  | 250  | 500 | 1000 | 2000 | 4000 | 8000 | dB(A) |     |     |
| 25.6 | 25.0 | 22.1 | <17 | <17  | <17  | <17  | 21.0 | 21.0  | <20 | <20 |

Diffusers disposition Print

Output data from the selection software



Detail of the graduate plate



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KZ-CT  
SERIES

WITH AUTOMATIC REGULATION  
WITH THERMOSTATIC SPRING

### WORKING PRINCIPLE :

The angle of the fins is adjusted by rotating the central axis of the diffuser, connected to the adjustable fins with the use of bevel gears.

The central axis of the diffuser is connected to two springs, of which one is in thermo sensitive material and the another in steel. The thermo sensitive spring varies its own elasticity in relation of the injected air temperature, where as the steel spring maintains constant its own characteristics. The balance between the two springs determines the different angles of rotation of the axis and therefore the angles of inclination of the fins in relation to the supply air temperature.





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KZ  
SERIES

## PERFORMANCE

| Air flow |      | Model | velocity in the neck in m/s | regulation 0° (heating) |      |      |      |     |     |      |       | regulation 67° (cooling) |     |     |     |       |       |  |  |
|----------|------|-------|-----------------------------|-------------------------|------|------|------|-----|-----|------|-------|--------------------------|-----|-----|-----|-------|-------|--|--|
|          |      |       |                             | Vertical throw          |      |      |      |     |     | ΔP   | Lw    | Vertical throw           |     |     |     | ΔP    | Lw    |  |  |
|          |      |       |                             | Temperature difference  |      |      |      |     |     |      |       | Temperature difference   |     |     |     |       |       |  |  |
| l/s      | m³/h |       |                             | +5                      | +10  | +15  | +20  | +25 | +30 | Pa   | dB(A) | -3                       | -5  | -10 | -15 | Pa    | dB(A) |  |  |
| 63       | 225  | 200   | 2,0                         | 5,4                     | 3,8  | 3,1  | 2,7  | 2,4 | 2,2 | 1,7  | 21    | 0,5                      | 0,5 | 0,5 | 0,5 | 15,2  | 32    |  |  |
|          |      | 250   | 1,3                         | 4,2                     | 3,0  | 2,4  | 2,1  | 1,9 | 1,7 | 0,7  | 19    | 0,7                      | 0,7 | 0,7 | 0,7 | 6,0   | 23    |  |  |
| 83       | 300  | 200   | 2,7                         | 6,9                     | 4,9  | 4,0  | 3,4  | 3,1 | 2,8 | 3,0  | 29    | 0,5                      | 0,5 | 0,5 | 0,5 | 26,9  | 41    |  |  |
|          |      | 250   | 1,7                         | 5,4                     | 3,8  | 3,1  | 2,7  | 2,4 | 2,2 | 1,2  | 19    | 0,7                      | 0,7 | 0,7 | 0,7 | 10,6  | 32    |  |  |
| 97       | 350  | 200   | 3,2                         | 7,8                     | 5,5  | 4,5  | 3,9  | 3,5 | 3,2 | 4,1  | 33    | 0,5                      | 0,5 | 0,5 | 0,5 | 36,7  | 46    |  |  |
|          |      | 250   | 2,0                         | 6,1                     | 4,3  | 3,5  | 3,1  | 2,7 | 2,5 | 1,6  | 21    | 0,7                      | 0,7 | 0,7 | 0,7 | 14,4  | 36    |  |  |
|          |      | 315   | 1,3                         | 4,6                     | 3,3  | 2,7  | 2,3  | 2,1 | 1,9 | 0,6  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 5,8   | 23    |  |  |
| 125      | 450  | 200   | 4,1                         | 9,7                     | 6,8  | 5,6  | 4,8  | 4,3 | 3,9 | 6,7  | 41    | 0,5                      | 0,5 | 0,5 | 0,5 | 60,6  | 53    |  |  |
|          |      | 250   | 2,6                         | 7,5                     | 5,3  | 4,3  | 3,8  | 3,4 | 3,1 | 2,6  | 27    | 0,7                      | 0,7 | 0,7 | 0,7 | 23,8  | 44    |  |  |
|          |      | 315   | 1,6                         | 5,9                     | 4,2  | 3,4  | 3,0  | 2,6 | 2,4 | 1,1  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 9,5   | 30    |  |  |
| 153      | 550  | 200   | 5,0                         | 11,4                    | 8,1  | 6,6  | 5,7  | 5,1 | 4,7 | 10,1 | 47    | 0,5                      | 0,5 | 0,5 | 0,6 | 90,5  | 59    |  |  |
|          |      | 250   | 3,2                         | 8,9                     | 6,3  | 5,1  | 4,4  | 4,0 | 3,6 | 4,0  | 33    | 0,7                      | 0,7 | 0,7 | 0,7 | 35,6  | 50    |  |  |
|          |      | 315   | 2,0                         | 7,2                     | 5,1  | 4,2  | 3,6  | 3,2 | 2,9 | 1,6  | 20    | 1,0                      | 1,0 | 1,0 | 1,0 | 14,3  | 37    |  |  |
| 174      | 625  | 200   | 5,6                         | 12,7                    | 9,0  | 7,3  | 6,3  | 5,7 | 5,2 | 13,0 | 51    | 0,5                      | 0,5 | 0,6 | 0,7 | 116,9 | 62    |  |  |
|          |      | 250   | 3,6                         | 9,9                     | 7,0  | 5,7  | 4,9  | 4,4 | 4,0 | 5,1  | 37    | 0,7                      | 0,7 | 0,7 | 0,7 | 46,0  | 54    |  |  |
|          |      | 315   | 2,3                         | 8,2                     | 5,8  | 4,7  | 4,1  | 3,6 | 3,3 | 2,0  | 23    | 1,0                      | 1,0 | 1,0 | 1,0 | 18,4  | 40    |  |  |
| 201      | 725  | 200   | 6,5                         | 14,4                    | 10,2 | 8,3  | 7,2  | 6,4 | 5,9 | 17,5 | 55    | 0,5                      | 0,6 | 0,7 | 0,8 | 157,3 | 66    |  |  |
|          |      | 250   | 4,2                         | 11,2                    | 7,9  | 6,5  | 5,6  | 5,0 | 4,6 | 6,9  | 42    | 0,7                      | 0,7 | 0,7 | 0,7 | 61,9  | 58    |  |  |
|          |      | 315   | 2,6                         | 9,4                     | 6,7  | 5,5  | 4,7  | 4,2 | 3,9 | 2,8  | 27    | 1,0                      | 1,0 | 1,0 | 1,0 | 24,8  | 45    |  |  |
|          |      | 400   | 1,6                         | 6,3                     | 4,5  | 3,6  | 3,1  | 2,8 | 2,6 | 1,1  | 20    | 1,0                      | 1,0 | 1,0 | 1,0 | 9,7   | 31    |  |  |
| 250      | 900  | 250   | 5,2                         | 13,4                    | 9,5  | 7,7  | 6,7  | 6,0 | 5,5 | 10,6 | 48    | 0,7                      | 0,7 | 0,7 | 0,8 | 95,3  | 64    |  |  |
|          |      | 315   | 3,3                         | 11,7                    | 8,3  | 6,7  | 5,8  | 5,2 | 4,8 | 4,2  | 34    | 1,0                      | 1,0 | 1,0 | 1,0 | 38,2  | 51    |  |  |
|          |      | 400   | 2,0                         | 7,8                     | 5,5  | 4,5  | 3,9  | 3,5 | 3,2 | 1,7  | 22    | 1,0                      | 1,0 | 1,0 | 1,0 | 15,0  | 38    |  |  |
| 299      | 1075 | 250   | 6,2                         | 15,5                    | 11,0 | 9,0  | 7,8  | 6,9 | 6,3 | 15,1 | 54    | 0,7                      | 0,7 | 0,8 | 0,9 | 136,0 | 69    |  |  |
|          |      | 315   | 3,9                         | 13,9                    | 9,8  | 8,0  | 7,0  | 6,2 | 5,7 | 6,0  | 39    | 1,0                      | 1,0 | 1,0 | 1,0 | 54,5  | 57    |  |  |
|          |      | 400   | 2,4                         | 9,3                     | 6,6  | 5,4  | 4,7  | 4,2 | 3,8 | 2,4  | 27    | 1,0                      | 1,0 | 1,0 | 1,0 | 21,4  | 43    |  |  |
|          |      | 500   | 1,5                         | 6,7                     | 4,8  | 3,9  | 3,4  | 3,0 | 2,7 | 0,9  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 8,5   | 33    |  |  |
| 347      | 1250 | 315   | 4,5                         | 16,1                    | 11,4 | 9,3  | 8,1  | 7,2 | 6,6 | 8,2  | 44    | 1,0                      | 1,0 | 1,0 | 1,0 | 73,6  | 61    |  |  |
|          |      | 400   | 2,8                         | 10,8                    | 7,7  | 6,2  | 5,4  | 4,8 | 4,4 | 3,2  | 32    | 1,0                      | 1,0 | 1,0 | 1,0 | 28,9  | 48    |  |  |
|          |      | 500   | 1,8                         | 7,8                     | 5,5  | 4,5  | 3,9  | 3,5 | 3,2 | 1,3  | 20    | 1,0                      | 1,0 | 1,0 | 1,0 | 11,5  | 38    |  |  |
|          |      | 630   | 1,1                         | 5,2                     | 3,7  | 3,0  | 2,6  | 2,3 | 2,1 | 0,5  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 4,7   | 25    |  |  |
| 403      | 1450 | 315   | 5,2                         | 18,7                    | 13,2 | 10,8 | 9,3  | 8,4 | 7,6 | 11,0 | 48    | 1,0                      | 1,0 | 1,0 | 1,0 | 99,1  | 65    |  |  |
|          |      | 400   | 3,2                         | 12,5                    | 8,9  | 7,2  | 6,3  | 5,6 | 5,1 | 4,3  | 36    | 1,0                      | 1,0 | 1,0 | 1,0 | 38,9  | 52    |  |  |
|          |      | 500   | 2,1                         | 9,1                     | 6,5  | 5,3  | 4,6  | 4,1 | 3,7 | 1,7  | 22    | 1,0                      | 1,0 | 1,0 | 1,0 | 15,5  | 42    |  |  |
| 451      | 1625 | 315   | 5,9                         | 20,9                    | 14,8 | 12,1 | 10,5 | 9,4 | 8,5 | 13,8 | 52    | 1,0                      | 1,0 | 1,0 | 1,0 | 124,4 | 68    |  |  |
|          |      | 400   | 3,6                         | 14,0                    | 9,9  | 8,1  | 7,0  | 6,3 | 5,7 | 5,4  | 40    | 1,0                      | 1,0 | 1,0 | 1,0 | 48,9  | 56    |  |  |
|          |      | 500   | 2,3                         | 10,3                    | 7,3  | 5,9  | 5,1  | 4,6 | 4,2 | 2,2  | 25    | 1,0                      | 1,0 | 1,0 | 1,0 | 19,5  | 46    |  |  |
|          |      | 630   | 1,5                         | 6,8                     | 4,8  | 3,9  | 3,4  | 3,1 | 2,8 | 0,9  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 7,9   | 33    |  |  |





## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### PERFORMANCE

| Air flow |      | Model | velocity in the neck in m/s | regulation 0° (heating) |      |      |      |      |      |      |       | regulation 67° (cooling) |     |     |     |       |       |  |  |
|----------|------|-------|-----------------------------|-------------------------|------|------|------|------|------|------|-------|--------------------------|-----|-----|-----|-------|-------|--|--|
|          |      |       |                             | Vertical throw          |      |      |      |      |      | ΔP   | Lw    | Vertical throw           |     |     |     | ΔP    | Lw    |  |  |
|          |      |       |                             | Temperature difference  |      |      |      |      |      |      |       | Temperature difference   |     |     |     |       |       |  |  |
| l/s      | m³/h |       |                             | +5                      | +10  | +15  | +20  | +25  | +30  | Pa   | dB(A) | -3                       | -5  | -10 | -15 | Pa    | dB(A) |  |  |
| 500      | 1800 | 315   | 6,5                         | 23,1                    | 16,4 | 13,4 | 11,6 | 10,3 | 9,4  | 17,0 | 53    | 1,0                      | 1,0 | 1,0 | 1,0 | 152,7 | 71    |  |  |
|          |      | 400   | 4,0                         | 15,5                    | 11,0 | 9,0  | 7,8  | 7,0  | 6,3  | 6,7  | 41    | 1,0                      | 1,0 | 1,0 | 1,0 | 60,0  | 59    |  |  |
|          |      | 500   | 2,6                         | 11,4                    | 8,1  | 6,6  | 5,7  | 5,1  | 4,6  | 2,7  | 26    | 1,0                      | 1,0 | 1,0 | 1,0 | 23,9  | 49    |  |  |
|          |      | 630   | 1,6                         | 7,6                     | 5,4  | 4,4  | 3,8  | 3,4  | 3,1  | 1,1  | 19    | 1,0                      | 1,0 | 1,0 | 1,0 | 9,7   | 37    |  |  |
| 597      | 2150 | 400   | 4,8                         | 18,6                    | 13,1 | 10,7 | 9,3  | 8,3  | 7,6  | 9,5  | 47    | 1,0                      | 1,0 | 1,0 | 1,0 | 85,6  | 64    |  |  |
|          |      | 500   | 3,1                         | 13,7                    | 9,7  | 7,9  | 6,8  | 6,1  | 5,6  | 3,8  | 31    | 1,0                      | 1,0 | 1,0 | 1,0 | 34,2  | 54    |  |  |
|          |      | 630   | 1,9                         | 9,1                     | 6,4  | 5,2  | 4,5  | 4,1  | 3,7  | 1,5  | 20    | 1,0                      | 1,0 | 1,0 | 1,0 | 13,9  | 42    |  |  |
| 701      | 2525 | 400   | 5,6                         | 21,8                    | 15,4 | 12,6 | 10,9 | 9,7  | 8,9  | 13,1 | 52    | 1,0                      | 1,0 | 1,0 | 1,0 | 118,1 | 69    |  |  |
|          |      | 500   | 3,6                         | 16,1                    | 11,4 | 9,3  | 8,0  | 7,2  | 6,6  | 5,2  | 37    | 1,0                      | 1,0 | 1,0 | 1,1 | 47,1  | 59    |  |  |
|          |      | 630   | 2,3                         | 10,7                    | 7,5  | 6,2  | 5,3  | 4,8  | 4,4  | 2,1  | 21    | 1,0                      | 1,0 | 1,0 | 1,0 | 19,1  | 47    |  |  |
| 799      | 2875 | 400   | 6,4                         | 24,8                    | 17,5 | 14,3 | 12,4 | 11,1 | 10,1 | 17,0 | 56    | 1,0                      | 1,0 | 1,0 | 1,0 | 153,1 | 72    |  |  |
|          |      | 500   | 4,1                         | 18,4                    | 13,0 | 10,6 | 9,2  | 8,2  | 7,5  | 6,8  | 41    | 1,0                      | 1,0 | 1,1 | 1,3 | 61,1  | 63    |  |  |
|          |      | 630   | 2,6                         | 12,2                    | 8,6  | 7,0  | 6,1  | 5,4  | 5,0  | 2,8  | 24    | 1,0                      | 1,0 | 1,0 | 1,0 | 24,8  | 51    |  |  |
| 903      | 3250 | 500   | 4,6                         | 20,8                    | 14,7 | 12,0 | 10,4 | 9,3  | 8,5  | 8,7  | 44    | 1,0                      | 1,0 | 1,2 | 1,4 | 78,0  | 66    |  |  |
|          |      | 630   | 2,9                         | 13,8                    | 9,7  | 7,9  | 6,9  | 6,2  | 5,6  | 3,5  | 27    | 1,0                      | 1,0 | 1,0 | 1,1 | 31,7  | 55    |  |  |
| 1000     | 3600 | 500   | 5,1                         | 23,1                    | 16,4 | 13,4 | 11,6 | 10,3 | 9,4  | 10,6 | 48    | 1,1                      | 1,1 | 1,4 | 1,6 | 95,7  | 69    |  |  |
|          |      | 630   | 3,2                         | 15,3                    | 10,8 | 8,8  | 7,6  | 6,8  | 6,2  | 4,3  | 30    | 1,0                      | 1,0 | 1,1 | 1,3 | 38,9  | 58    |  |  |
| 1097     | 3950 | 500   | 5,6                         | 25,4                    | 18,0 | 14,7 | 12,7 | 11,4 | 10,4 | 12,8 | 51    | 1,2                      | 1,3 | 1,5 | 1,7 | 115,3 | 72    |  |  |
|          |      | 630   | 3,5                         | 16,8                    | 11,8 | 9,7  | 8,4  | 7,5  | 6,8  | 5,2  | 33    | 1,0                      | 1,0 | 1,2 | 1,4 | 46,8  | 60    |  |  |
| 1201     | 4325 | 500   | 6,2                         | 27,9                    | 19,7 | 16,1 | 14,0 | 12,5 | 11,4 | 15,3 | 53    | 1,3                      | 1,4 | 1,6 | 1,9 | 138,2 | 74    |  |  |
|          |      | 630   | 3,9                         | 18,4                    | 13,0 | 10,6 | 9,2  | 8,2  | 7,5  | 6,2  | 36    | 1,0                      | 1,1 | 1,3 | 1,6 | 56,1  | 63    |  |  |
| 1299     | 4675 | 630   | 4,2                         | 19,9                    | 14,0 | 11,5 | 9,9  | 8,9  | 8,1  | 7,3  | 39    | 1,1                      | 1,2 | 1,4 | 1,7 | 65,6  | 65    |  |  |
| 1403     | 5050 | 630   | 4,5                         | 21,5                    | 15,2 | 12,4 | 10,7 | 9,6  | 8,8  | 8,5  | 41    | 1,2                      | 1,3 | 1,6 | 1,8 | 76,5  | 68    |  |  |
| 1500     | 5400 | 630   | 4,8                         | 23,0                    | 16,3 | 13,3 | 11,5 | 10,3 | 9,4  | 9,7  | 43    | 1,3                      | 1,4 | 1,7 | 2,0 | 87,5  | 69    |  |  |
| 1701     | 6125 | 630   | 5,5                         | 26,1                    | 18,5 | 15,1 | 13,1 | 11,7 | 10,7 | 12,5 | 47    | 1,5                      | 1,6 | 1,9 | 2,3 | 112,6 | 73    |  |  |
| 1903     | 6850 | 630   | 6,1                         | 29,2                    | 20,7 | 16,9 | 14,6 | 13,1 | 11,9 | 15,6 | 50    | 1,7                      | 1,8 | 2,2 | 2,6 | 140,8 | 76    |  |  |

The throw values are based on a terminal velocity of 0,20 m/s.

The values of pressure drop are for the diffuser without plenum

The acoustic data are in sound power and do not consider the attenuation due to the environment, and in particular due to the distance.

All values are for diffuser without equalizer (see correction factors).

Intermediate values can be calculated by interpolation.

| Indicative noise attenuation values<br>depending on the distance from the diffuser |                      |                 |                      |
|------------------------------------------------------------------------------------|----------------------|-----------------|----------------------|
| distance<br>[m]                                                                    | attenuation<br>[dBa] | distance<br>[m] | attenuation<br>[dBa] |
| 1                                                                                  | -8,0                 | 9               | -27,1                |
| 2                                                                                  | -14,0                | 10              | -28,0                |
| 3                                                                                  | -17,5                | 11              | -28,8                |
| 4                                                                                  | -20,0                | 12              | -29,6                |
| 5                                                                                  | -22,0                | 13              | -30,3                |
| 6                                                                                  | -23,6                | 14              | -30,9                |
| 7                                                                                  | -24,9                | 15              | -31,5                |
| 8                                                                                  | -26,1                | 16              | -32,1                |

The values in the table refer to the attenuation in function of the distance in hemispheric space.





# **HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY**

**KZ  
SERIES**

## **PERFORMANCE**

| Air flow |      | Model | velocity in the neck in m/s | Distance in m | regulation 45°         |     |     |     |      |       | regulation 30°         |      |      |     |      |       |
|----------|------|-------|-----------------------------|---------------|------------------------|-----|-----|-----|------|-------|------------------------|------|------|-----|------|-------|
|          |      |       |                             |               | Vertical throw         |     |     |     | ΔP   | Lw    | Vertical throw         |      |      |     | ΔP   | Lw    |
|          |      |       |                             |               | Temperature difference |     |     |     |      |       | Temperature difference |      |      |     |      |       |
| l/s      | m³/h |       |                             |               | -10                    | -5  | +5  | +15 | Pa   | dB(A) | -10                    | -5   | +5   | +15 | Pa   | dB(A) |
| 63       | 225  | 200   | 2,0                         | 1,9           | 2,4                    | 2,0 | 1,7 | 1,2 | 3,8  | 25    | 5,5                    | 4,6  | 3,6  | 2,1 | 2,4  | 22    |
|          |      | 250   | 1,3                         | 1,7           | 1,8                    | 1,5 | 1,3 | 0,9 | 1,5  | 19    | 4,1                    | 3,5  | 2,8  | 1,6 | 0,9  | 19    |
| 83       | 300  | 200   | 2,7                         | 2,6           | 3,2                    | 2,7 | 2,3 | 1,7 | 6,7  | 33    | 7,4                    | 6,2  | 4,5  | 2,6 | 4,2  | 30    |
|          |      | 250   | 1,7                         | 1,9           | 2,4                    | 2,0 | 1,8 | 1,3 | 2,6  | 22    | 5,6                    | 4,7  | 3,5  | 2,0 | 1,6  | 20    |
| 97       | 350  | 200   | 3,2                         | 3,0           | 3,7                    | 3,1 | 2,7 | 1,9 | 9,2  | 38    | 8,6                    | 7,2  | 5,2  | 3,0 | 5,7  | 35    |
|          |      | 250   | 2,0                         | 2,2           | 2,8                    | 2,4 | 2,1 | 1,5 | 3,6  | 26    | 6,6                    | 5,5  | 4,0  | 2,3 | 2,2  | 23    |
|          |      | 315   | 1,3                         | 2,1           | 1,7                    | 1,5 | 1,3 | 1,0 | 1,4  | 19    | 4,0                    | 3,4  | 3,0  | 1,8 | 0,9  | 19    |
| 125      | 450  | 200   | 4,1                         | 3,9           | 4,9                    | 4,1 | 3,5 | 2,5 | 15,1 | 46    | 11,2                   | 9,4  | 6,4  | 3,7 | 9,4  | 43    |
|          |      | 250   | 2,6                         | 2,8           | 3,7                    | 3,1 | 2,7 | 1,9 | 6,0  | 33    | 8,5                    | 7,1  | 5,0  | 2,9 | 3,7  | 30    |
|          |      | 315   | 1,6                         | 2,1           | 2,3                    | 1,9 | 1,7 | 1,2 | 2,4  | 21    | 5,2                    | 4,4  | 3,9  | 2,2 | 1,5  | 20    |
| 153      | 550  | 200   | 5,0                         | 4,7           | 6,0                    | 5,0 | 4,3 | 3,1 | 22,6 | 52    | 13,7                   | 11,5 | 7,5  | 4,3 | 14,1 | 49    |
|          |      | 250   | 3,2                         | 3,5           | 4,6                    | 3,8 | 3,3 | 2,4 | 8,9  | 40    | 10,5                   | 8,8  | 5,9  | 3,4 | 5,5  | 36    |
|          |      | 315   | 2,0                         | 2,4           | 2,8                    | 2,3 | 2,1 | 1,5 | 3,6  | 25    | 6,4                    | 5,4  | 4,7  | 2,7 | 2,2  | 22    |
| 174      | 625  | 200   | 5,6                         | 5,4           | 6,8                    | 5,7 | 4,9 | 3,5 | 29,2 | 55    | 15,7                   | 13,1 | 8,4  | 4,8 | 18,2 | 53    |
|          |      | 250   | 3,6                         | 3,9           | 5,2                    | 4,4 | 3,8 | 2,7 | 11,5 | 43    | 12,0                   | 10,0 | 6,5  | 3,8 | 7,1  | 40    |
|          |      | 315   | 2,3                         | 2,7           | 3,2                    | 2,7 | 2,4 | 1,7 | 4,6  | 29    | 7,3                    | 6,2  | 5,4  | 3,1 | 2,9  | 25    |
| 201      | 725  | 200   | 6,5                         | 6,2           | 7,9                    | 6,6 | 5,7 | 4,1 | 39,3 | 60    | 18,2                   | 15,3 | 9,5  | 5,5 | 24,5 | 57    |
|          |      | 250   | 4,2                         | 4,6           | 6,1                    | 5,1 | 4,4 | 3,1 | 15,4 | 48    | 14,0                   | 11,7 | 7,4  | 4,3 | 9,6  | 44    |
|          |      | 315   | 2,6                         | 3,1           | 3,7                    | 3,1 | 2,8 | 2,0 | 6,2  | 34    | 8,6                    | 7,2  | 6,2  | 3,6 | 3,8  | 30    |
|          |      | 400   | 1,6                         | 2,7           | 2,2                    | 1,8 | 1,7 | 1,2 | 2,4  | 22    | 5,0                    | 4,2  | 4,1  | 2,4 | 1,5  | 20    |
| 250      | 900  | 250   | 5,2                         | 5,7           | 7,6                    | 6,4 | 5,5 | 3,9 | 23,8 | 54    | 17,5                   | 14,6 | 8,8  | 5,1 | 14,8 | 51    |
|          |      | 315   | 3,3                         | 3,9           | 4,7                    | 3,9 | 3,5 | 2,5 | 9,5  | 40    | 10,7                   | 9,0  | 7,7  | 4,4 | 5,9  | 36    |
|          |      | 400   | 2,0                         | 2,7           | 2,7                    | 2,3 | 2,1 | 1,5 | 3,7  | 28    | 6,3                    | 5,3  | 5,1  | 3,0 | 2,3  | 24    |
| 299      | 1075 | 250   | 6,2                         | 6,8           | 9,1                    | 7,6 | 6,6 | 4,7 | 34,0 | 60    | 21,0                   | 17,6 | 10,2 | 5,9 | 21,1 | 56    |
|          |      | 315   | 3,9                         | 4,7           | 5,6                    | 4,7 | 4,2 | 3,0 | 13,6 | 46    | 12,9                   | 10,8 | 9,2  | 5,3 | 8,5  | 42    |
|          |      | 400   | 2,4                         | 3,2           | 3,3                    | 2,8 | 2,6 | 1,8 | 5,3  | 33    | 7,6                    | 6,3  | 6,1  | 3,5 | 3,3  | 29    |
|          |      | 500   | 1,5                         | 3,5           | 4,4                    | 3,7 | 3,3 | 2,4 | 2,1  | 21    | 10,1                   | 8,4  | 4,4  | 2,6 | 1,3  | 20    |
| 347      | 1250 | 315   | 4,5                         | 5,4           | 6,6                    | 5,5 | 5,0 | 3,5 | 18,4 | 50    | 15,1                   | 12,7 | 10,6 | 6,1 | 11,4 | 46    |
|          |      | 400   | 2,8                         | 3,7           | 3,8                    | 3,2 | 3,0 | 2,1 | 7,2  | 38    | 8,8                    | 7,4  | 7,1  | 4,1 | 4,5  | 34    |
|          |      | 500   | 1,8                         | 3,5           | 5,1                    | 4,3 | 3,9 | 2,8 | 2,9  | 25    | 11,8                   | 9,9  | 5,2  | 3,0 | 1,8  | 21    |
|          |      | 630   | 1,1                         | 4,1           | 3,9                    | 3,3 | 2,9 | 2,1 | 1,2  | 19    | 9,1                    | 7,6  | 3,5  | 2,0 | 0,7  | 19    |
| 403      | 1450 | 315   | 5,2                         | 6,3           | 7,7                    | 6,4 | 5,8 | 4,1 | 24,7 | 55    | 17,6                   | 14,8 | 12,3 | 7,1 | 15,4 | 51    |
|          |      | 400   | 3,2                         | 4,3           | 4,5                    | 3,7 | 3,5 | 2,5 | 9,7  | 42    | 10,3                   | 8,6  | 8,3  | 4,8 | 6,1  | 39    |
|          |      | 500   | 2,1                         | 3,5           | 6,0                    | 5,0 | 4,6 | 3,3 | 3,9  | 29    | 13,8                   | 11,6 | 6,0  | 3,5 | 2,4  | 25    |
| 451      | 1625 | 315   | 5,9                         | 7,0           | 8,6                    | 7,2 | 6,5 | 4,7 | 31,1 | 58    | 19,8                   | 16,6 | 13,8 | 8,0 | 19,3 | 54    |
|          |      | 400   | 3,6                         | 4,8           | 5,0                    | 4,2 | 3,9 | 2,8 | 12,2 | 46    | 11,6                   | 9,7  | 9,3  | 5,3 | 7,6  | 42    |
|          |      | 500   | 2,3                         | 3,7           | 6,8                    | 5,7 | 5,2 | 3,7 | 4,9  | 33    | 15,5                   | 13,0 | 6,8  | 3,9 | 3,0  | 28    |
|          |      | 630   | 1,5                         | 4,1           | 5,2                    | 4,4 | 3,9 | 2,8 | 2,0  | 20    | 12,1                   | 10,1 | 4,5  | 2,6 | 1,2  | 19    |



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### PERFORMANCE

| Air flow               |      | Model | velocity in the neck in m/s | Distance in m | regulation 45°         |      |      |      |      |    | regulation 30° |       |      |      |      |    |
|------------------------|------|-------|-----------------------------|---------------|------------------------|------|------|------|------|----|----------------|-------|------|------|------|----|
|                        |      |       |                             |               | Vertical throw         |      |      |      | ΔP   | Lw | Vertical throw |       |      |      | ΔP   | Lw |
| Temperature difference |      |       |                             |               | Temperature difference |      |      |      |      |    |                |       |      |      |      |    |
| l/s                    | m³/h |       |                             |               | -10                    | -5   | +5   | +15  |      |    | Pa             | dB(A) | -10  | -5   |      |    |
| 500                    | 1800 | 315   | 6,5                         | 7,8           | 9,6                    | 8,0  | 7,2  | 5,2  | 38,1 | 60 | 22,1           | 18,5  | 15,2 | 8,8  | 23,7 | 56 |
|                        |      | 400   | 4,0                         | 5,4           | 5,6                    | 4,7  | 4,3  | 3,1  | 15,0 | 48 | 12,8           | 10,8  | 10,2 | 5,9  | 9,3  | 44 |
|                        |      | 500   | 2,6                         | 4,1           | 7,5                    | 6,3  | 5,7  | 4,1  | 6,0  | 35 | 17,3           | 14,5  | 7,5  | 4,3  | 3,7  | 30 |
|                        |      | 630   | 1,6                         | 4,1           | 5,9                    | 4,9  | 4,4  | 3,1  | 2,4  | 21 | 13,5           | 11,3  | 5,0  | 2,9  | 1,5  | 19 |
| 597                    | 2150 | 400   | 4,8                         | 6,4           | 6,7                    | 5,6  | 5,2  | 3,7  | 21,4 | 53 | 15,4           | 12,9  | 12,2 | 7,1  | 13,3 | 50 |
|                        |      | 500   | 3,1                         | 4,9           | 9,1                    | 7,6  | 6,9  | 4,9  | 8,5  | 40 | 20,8           | 17,5  | 9,0  | 5,2  | 5,3  | 35 |
|                        |      | 630   | 1,9                         | 4,1           | 7,1                    | 6,0  | 5,3  | 3,8  | 3,5  | 25 | 16,4           | 13,7  | 6,0  | 3,4  | 2,2  | 21 |
| 701                    | 2525 | 400   | 5,6                         | 7,5           | 7,9                    | 6,6  | 6,2  | 4,4  | 29,5 | 58 | 18,2           | 15,2  | 14,3 | 8,3  | 18,4 | 54 |
|                        |      | 500   | 3,6                         | 5,7           | 10,7                   | 9,0  | 8,2  | 5,9  | 11,8 | 45 | 24,7           | 20,7  | 10,6 | 6,1  | 7,3  | 40 |
|                        |      | 630   | 2,3                         | 4,1           | 8,5                    | 7,1  | 6,3  | 4,5  | 4,8  | 30 | 19,5           | 16,4  | 7,0  | 4,1  | 3,0  | 24 |
| 799                    | 2875 | 400   | 6,4                         | 8,6           | 9,0                    | 7,6  | 7,0  | 5,0  | 38,2 | 62 | 20,8           | 17,4  | 16,3 | 9,4  | 23,8 | 58 |
|                        |      | 500   | 4,1                         | 6,5           | 12,3                   | 10,3 | 9,4  | 6,7  | 15,3 | 49 | 28,3           | 23,7  | 12,1 | 7,0  | 9,5  | 44 |
|                        |      | 630   | 2,6                         | 4,7           | 9,8                    | 8,2  | 7,2  | 5,2  | 6,2  | 34 | 22,5           | 18,8  | 8,0  | 4,6  | 3,9  | 28 |
| 903                    | 3250 | 500   | 4,6                         | 7,3           | 14,0                   | 11,7 | 10,7 | 7,6  | 19,5 | 53 | 32,2           | 26,9  | 13,7 | 7,9  | 12,1 | 48 |
|                        |      | 630   | 2,9                         | 5,3           | 11,2                   | 9,4  | 8,3  | 5,9  | 7,9  | 38 | 25,7           | 21,5  | 9,1  | 5,2  | 4,9  | 32 |
| 1000                   | 3600 | 500   | 5,1                         | 8,1           | 15,5                   | 13,0 | 11,9 | 8,5  | 23,9 | 56 | 35,8           | 30,0  | 15,2 | 8,8  | 14,9 | 51 |
|                        |      | 630   | 3,2                         | 5,8           | 12,5                   | 10,5 | 9,3  | 6,6  | 9,7  | 41 | 28,7           | 24,1  | 10,1 | 5,8  | 6,0  | 35 |
| 1097                   | 3950 | 500   | 5,6                         | 8,9           | 17,1                   | 14,4 | 13,1 | 9,4  | 28,8 | 59 | 39,5           | 33,1  | 16,8 | 9,7  | 17,9 | 54 |
|                        |      | 630   | 3,5                         | 6,4           | 13,8                   | 11,6 | 10,2 | 7,3  | 11,7 | 44 | 31,8           | 26,6  | 11,0 | 6,4  | 7,3  | 38 |
| 1201                   | 4325 | 500   | 6,2                         | 9,8           | 18,8                   | 15,8 | 14,4 | 10,3 | 34,5 | 61 | 43,4           | 36,4  | 18,4 | 10,6 | 21,5 | 57 |
|                        |      | 630   | 3,9                         | 7,0           | 15,2                   | 12,8 | 11,3 | 8,1  | 14,0 | 46 | 35,1           | 29,4  | 12,1 | 7,0  | 8,7  | 40 |
| 1299                   | 4675 | 630   | 4,2                         | 7,6           | 16,6                   | 13,9 | 12,3 | 8,8  | 16,4 | 49 | 38,2           | 32,0  | 13,1 | 7,6  | 10,2 | 43 |
| 1403                   | 5050 | 630   | 4,5                         | 8,2           | 18,0                   | 15,1 | 13,4 | 9,6  | 19,1 | 51 | 41,5           | 34,8  | 14,2 | 8,2  | 11,9 | 45 |
| 1500                   | 5400 | 630   | 4,8                         | 8,8           | 19,4                   | 16,3 | 14,4 | 10,3 | 21,9 | 53 | 44,7           | 37,4  | 15,1 | 8,7  | 13,6 | 47 |
| 1701                   | 6125 | 630   | 5,5                         | 9,9           | 22,3                   | 18,7 | 16,5 | 11,8 | 28,1 | 57 | 51,2           | 42,9  | 17,2 | 9,9  | 17,5 | 51 |
| 1903                   | 6850 | 630   | 6,1                         | 11,1          | 25,1                   | 21,1 | 18,7 | 13,3 | 35,2 | 60 | 57,9           | 48,5  | 19,3 | 11,1 | 21,9 | 55 |

The throw values are based on a terminal velocity of 0,20 m/s.

The values of pressure drop are for the diffuser without plenum

The acoustic data are in sound power and do not consider the attenuation due to the environment, and in particular due to the distance.

All values are for diffuser without equalizer (see correction factors).

Intermediate values can be calculated by interpolation.

| Indicative noise attenuation values<br>depending on the distance from the diffuser |                      |                 |                      |
|------------------------------------------------------------------------------------|----------------------|-----------------|----------------------|
| distance<br>[m]                                                                    | attenuation<br>[dBa] | distance<br>[m] | attenuation<br>[dBa] |
| 1                                                                                  | -8,0                 | 9               | -27,1                |
| 2                                                                                  | -14,0                | 10              | -28,0                |
| 3                                                                                  | -17,5                | 11              | -28,8                |
| 4                                                                                  | -20,0                | 12              | -29,6                |
| 5                                                                                  | -22,0                | 13              | -30,3                |
| 6                                                                                  | -23,6                | 14              | -30,9                |
| 7                                                                                  | -24,9                | 15              | -31,5                |
| 8                                                                                  | -26,1                | 16              | -32,1                |

The values in the table refer to the attenuation in function of the distance in hemispheric space.



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### PERFORMANCE

#### CORRECTION FACTOR FOR DIFFUSER WITH EQUALIZER :

| Model | Multiplying factor of throw |      |      |      |
|-------|-----------------------------|------|------|------|
|       | fins angle                  |      |      |      |
|       | 0°                          | 30°  | 45°  | 67°  |
| 160   |                             |      |      |      |
| 200   | 0,70                        | 0,78 | 0,85 | 1,00 |
| 250   |                             |      |      |      |
| 315   |                             |      |      |      |
| 400   |                             |      |      |      |
| 500   |                             |      |      |      |
| 630   |                             |      |      |      |

| Model | Multiplying factor of pressure drop |     |     |     |
|-------|-------------------------------------|-----|-----|-----|
|       | fins angle                          |     |     |     |
|       | 0°                                  | 30° | 45° | 67° |
| 160   |                                     |     |     |     |
| 200   | 4,7                                 | 3,7 | 2,7 | 1,4 |
| 250   | 4,9                                 | 3,8 | 2,7 | 1,4 |
| 315   | 5,5                                 | 4,2 | 3,0 | 1,5 |
| 400   | 5,7                                 | 4,4 | 3,1 | 1,5 |
| 500   | 5,9                                 | 4,5 | 3,2 | 1,5 |
| 630   | 5,9                                 | 4,5 | 3,2 | 1,5 |

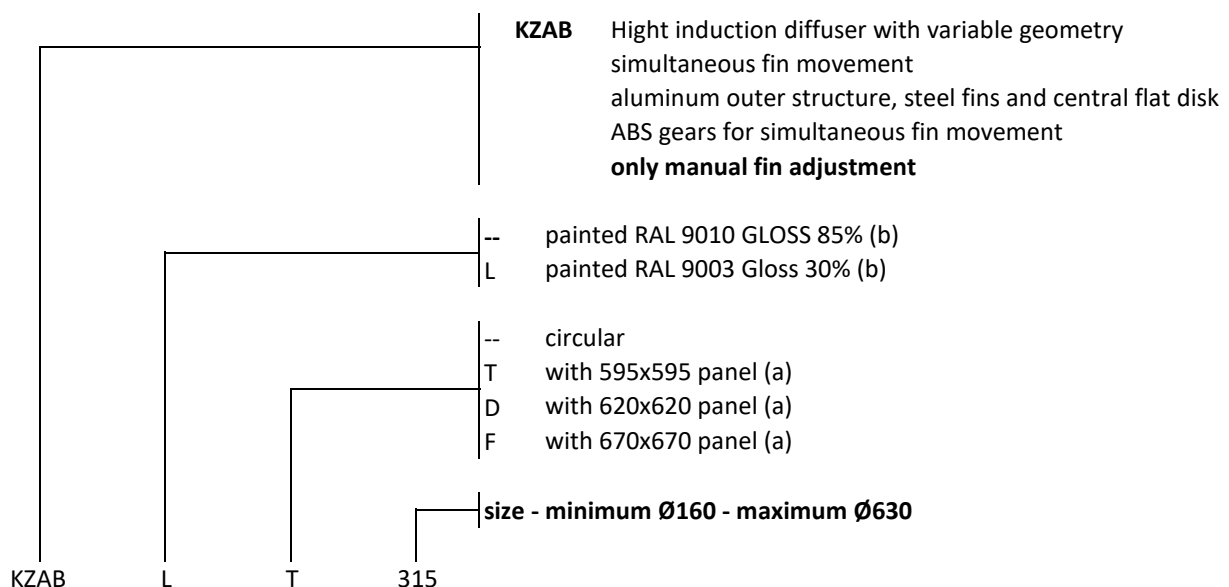
| Model | Addiction factor of noise |     |     |     |
|-------|---------------------------|-----|-----|-----|
|       | fins angle                |     |     |     |
|       | 0°                        | 30° | 45° | 67° |
| 160   |                           |     |     |     |
| 200   | 9                         | 9   | 7   | 5   |
| 250   | 10                        | 9   | 8   | 4   |
| 315   | 13                        | 11  | 9   | 5   |
| 400   | 13                        | 12  | 10  | 6   |
| 500   | 15                        | 13  | 11  | 5   |
| 630   | 18                        | 16  | 12  | 6   |



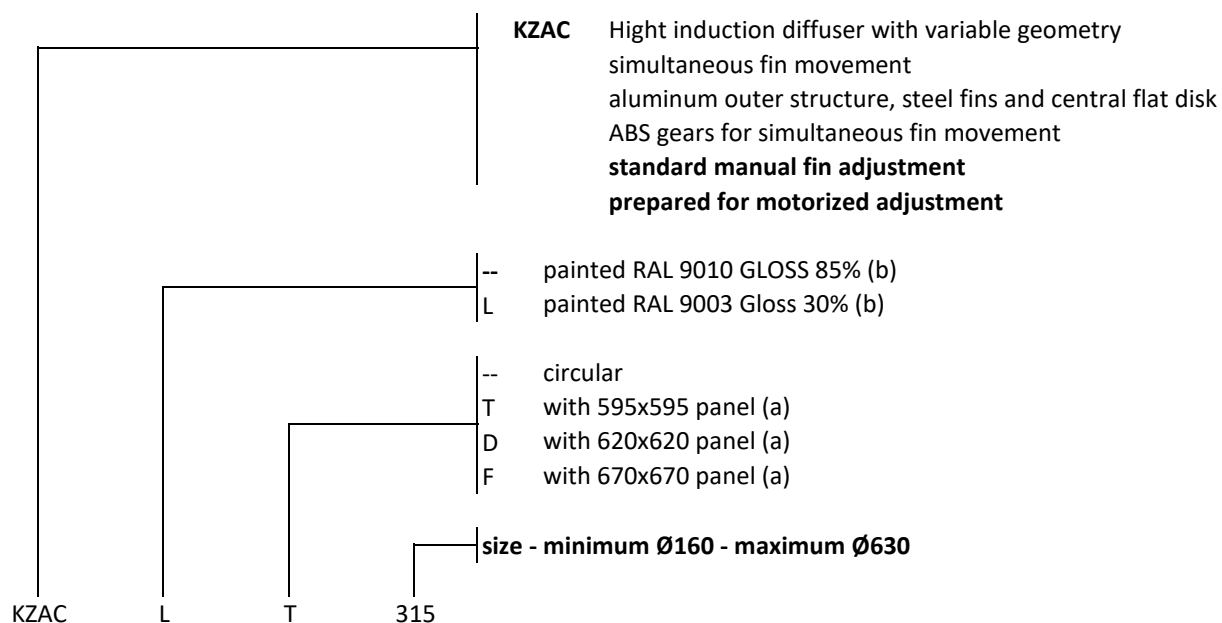
## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### HOW TO ORDER



- (a) Only diameters 200 - 250 - 315  
the versions with panel has steel external structure
- (b) different painting on request



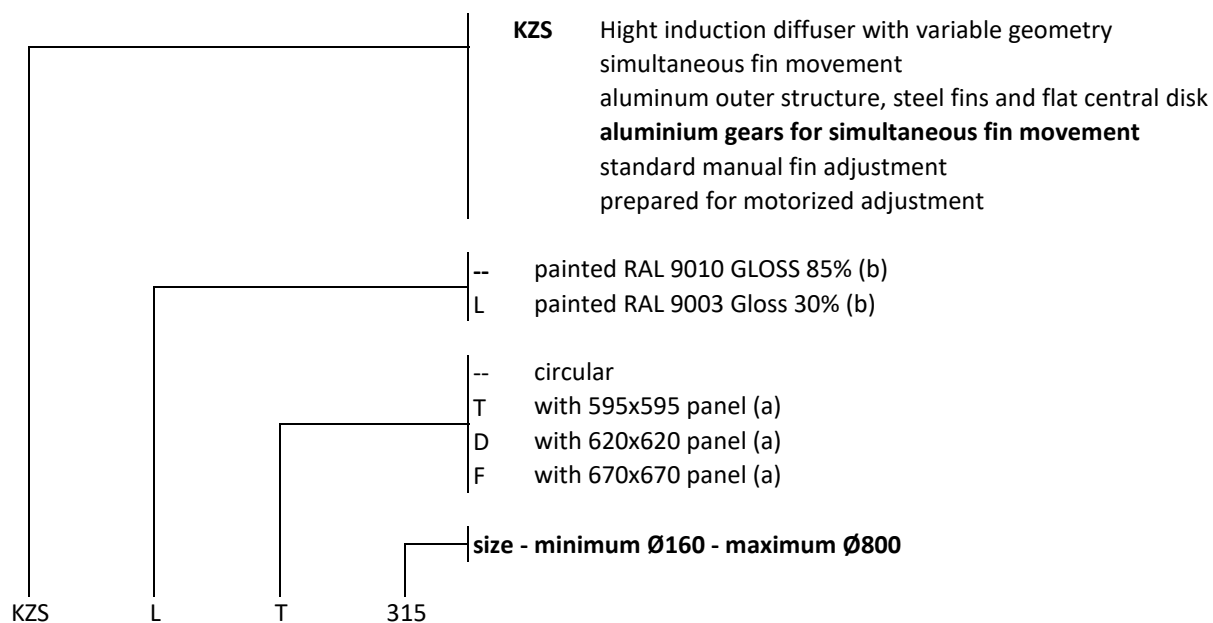
- (a) Only diameters 200 - 250 - 315  
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- (b) different painting on request



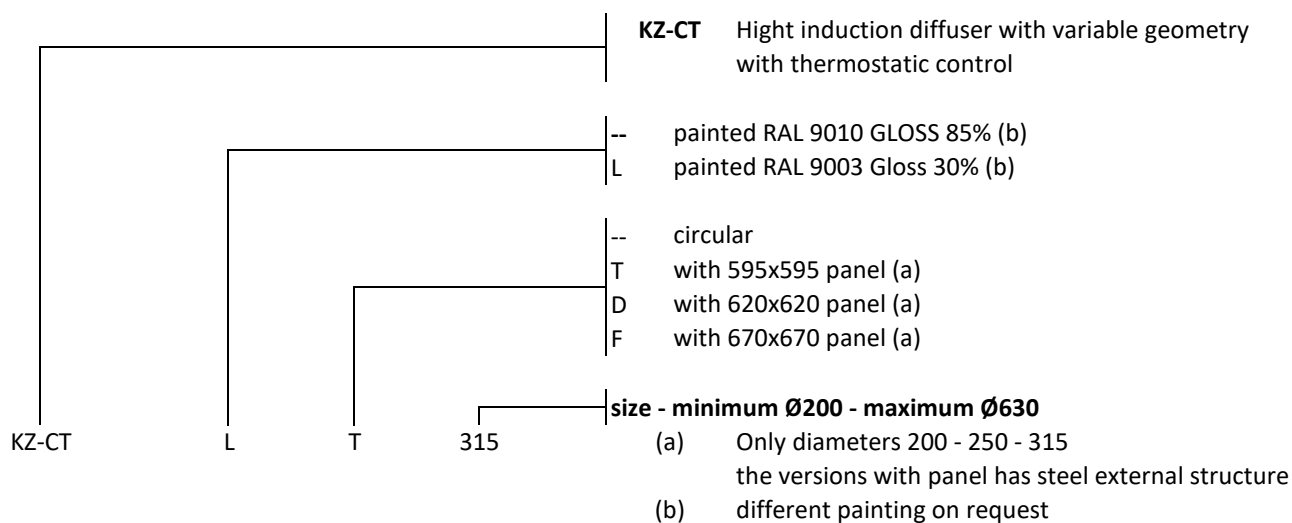
## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

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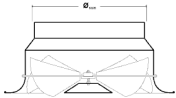


## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### HOW TO ORDER

| Nominal diameter | Equalizer |  |
|------------------|-----------|------------------------------------------------------------------------------------|
| 160              | KZ-EQ160  |                                                                                    |
| 200              | KZ-EQ200  |                                                                                    |
| 250              | KZ-EQ250  |                                                                                    |
| 315              | KZ-EQ315  |                                                                                    |
| 400              | KZ-EQ400  |                                                                                    |
| 500              | KZ-EQ500  |                                                                                    |
| 630              | KZ-EQ630  |                                                                                    |
| 800              | KZ-EQ800  |                                                                                    |

|  |              |  |  |
|-----------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Nominal diameter                                                                  | manufacturer | Electric proportional actuator 24 V                                                | Electric on-off actuator 24 V                                                       |
| 200 - 250 - 315                                                                   | Belimo       | WM-LM24ASR                                                                         | WM-LM24A                                                                            |
|                                                                                   | Siemens      | WM-GDB161.1E                                                                       | WM-GDB131.1E                                                                        |
| 400 - 500                                                                         | Belimo       | WM-NM24ASR                                                                         | WM-NM24A                                                                            |
|                                                                                   | Siemens      | WM-GDB161.1E                                                                       | WM-GDB131.1E                                                                        |
| 630 - 800                                                                         | Belimo       | WM-SM24ASR                                                                         | WM-SM24A                                                                            |
|                                                                                   | Siemens      | WM-GDB161.1E                                                                       | WM-GDB131.1E                                                                        |



## PLENUM FOR CIRCULAR DIFFUSER

PP 60  
SERIES

### OVERVIEW

#### PLENUM :

The PP60 plenums, also named "calm cases", allow the correct entry of air in the neck of the diffuser thus ensuring that the throw of air in the room is homogenous along all the circumference of the diffuser.

#### Materials :

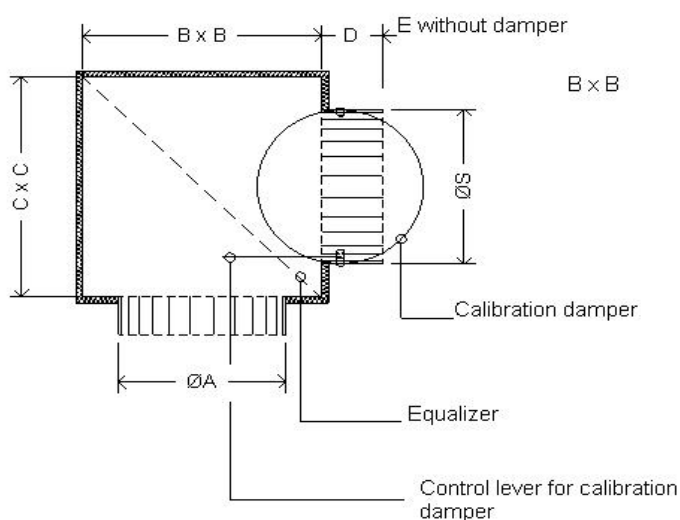
PP 60 standard plenum : galvanized steel sheet.  
Insulation: expanded polyethylene certified for the reaction to fire according to european class B-s2 d0.

#### Versions :

Made from insulated steel sheet with expanded polyethylene, ideal for the supply of air, and in simple sheet steel normally used for air extraction.

#### Accessories:

Regulation damper and equalizing net in the connection of the plenum.



| nominal<br>neck<br>diameter<br>mm | A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | N° of<br>connections | S [mm]<br>mm | connection<br>and damper<br>material |
|-----------------------------------|---------|---------|---------|---------|---------|----------------------|--------------|--------------------------------------|
| 160                               | 162     | 250     | 250     | 90      | 60      | 1                    | 156          | ABS (*)                              |
| 200                               | 202     | 300     | 300     | 90      | 60      | 1                    | 196          | ABS (*)                              |
| 250                               | 252     | 350     | 350     | 90      | 60      | 1                    | 246          | ABS (*)                              |
| 315                               | 317     | 400     | 400     | 90      | 60      | 1                    | 311          | steel                                |
| 400                               | 402     | 500     | 500     | 90      | 90      | 1                    | 396          | steel                                |
| 500                               | 503     | 600     | 600     | 100     | 100     | 1                    | 496          | steel                                |
| 630                               | 633     | 730     | 730     | 100     | 100     | 1                    | 600          | steel                                |

(\*) steel on request





## PLENUM FOR CIRCULAR DIFFUSER

### HOW TO ORDER

## PP 60 SERIES

