



## FLOOR DIFFUSERS

TE-KP  
SERIES

### OVERVIEW

#### Overview:

The TE-KP series floor diffusers belong to the under-chair diffuser category; ideal for places where the best comfort levels are desired both in temperature and acoustics. Cinemas, theatres and conference halls are some examples.

The internal drum has a helicoidal motion for the flow of air to the outside, improving circulation and allowing excellent results with a temperature difference no bigger than 6°C between the air received and the room temperature, both when heating and cooling.

The TE-KP series diffusers are equipped with a supporting ring (two versions are available: for supported floors and concrete floors) that allows ease of access to the internal components for cleaning and maintenance and guarantees an even surface to walk on without the risk of persons tripping on uneven surfaces or dirt settling on the diffuser.

The diffusers can be installed directly into the supported floor or attached to a under diffuser plenum.

#### Technical characteristics:

The TE-KP series diffusers are formed by:

- 1) Grilled plate
- 2) Diffuser with fan blades
- 3) Regulation shutter (optional, to be ordered with dust collecting bin)
- 4) Supporting ring for installation on raised floors
- 5) Supporting ring for concrete floors (alternative)
- 6) Plenum in steel (optional, used for installation in raised floors not sealed)

#### Details:

The paint job is done with a ionised powder Ral 9005 opaque finish.

#### Regulation:

The air diffused can be regulated by means of the preinstalled shutter. Turning the shutter inside the dust basket allows the openings to line up for a smaller or greater flow of air, varying therefore the gaps for the natural flow of air.

#### Particular environments:

The diffuser may also be fitted with a top rigid metal anti-rust grilled plate for either health reasons or aesthetics depending of which use is requested.

#### Unsuitable environments

The products in painted carbon steel are not suitable for installation in environments with high humidity and in environments with a potentially explosive atmosphere or containing powders or vapors of corrosive substances.



#### Fitting instructions:

The supporting ring for supported floors is made up of two parts. The top part is placed on the walking surface and the second, by mean of clips, is placed below. The two parts are held tight together by traction screws.

The supporting ring for concrete floors in one single piece and is fixed with hinges to the base.

With the ring fixed, the diffuser is simply inserted with in it.



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#### Air Velocity

By means of the cross flow of the air streams on the floor, the speed of the air itself reduces rapidly moving away from the centre of the diffuser. The maximum speed is reached at a high equal to 50mm.

Diagram 1 shows, in relation to the load, the distance to which the speed of the air at a height of 50mm reaches the value of 0,2m/s with an initial difference of temperature of 3°K.

Diagram 2 shows, in relation to the load, the speed of the air at 450mm from the diffuser from height from the floor of 50mm and 100mm, with an initial temperature difference of 3°K.

The rapid reduction of the difference in temperature between injected air and room temperature is highlighted in diagram 3, which shows the percentage drop of the difference in temperature in function of the distance from the centre of the diffuser for various load values. The values correspond to initial temperature differences between 2°K and 4°K.

Diagrams 4 and 5 use the choice of the two measure of the diffusers; supply, in function of the load, the noise level and the load

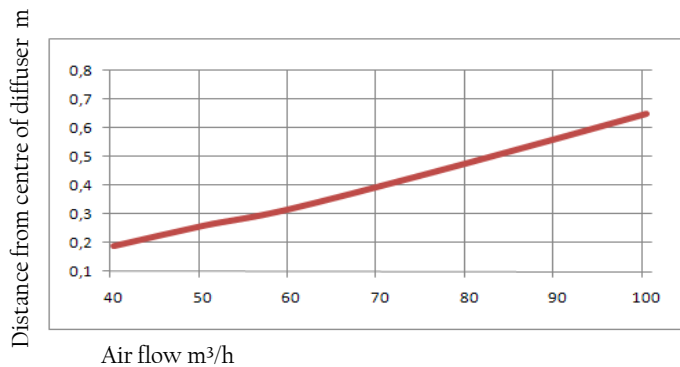


Diagram 1

Characteristics diffusers TE-KP125 TE-160

The diagram highlights, in function of the load, the distance in metres from the centre of the diffuser where a value of 0,2m/s is measured, at a height of 50mm. es taken with a difference in temperature between injected air and room temperature, equal to 3°K. The behaviour is identical for both diffuser size.

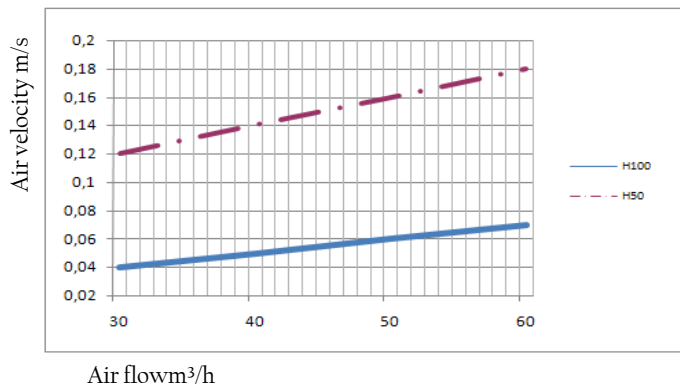


Diagram 2

Characteristics diffusers TE-KP125 TE-160

The diagram highlights, in function of the load, the speed of the air measured at 450mm from the centre of the diffuser at heights of 50mm and 100mm. Measurements made with a temperature difference between injected air and room temperature of 3°K. The behaviour is identical for both diffuser sizes.

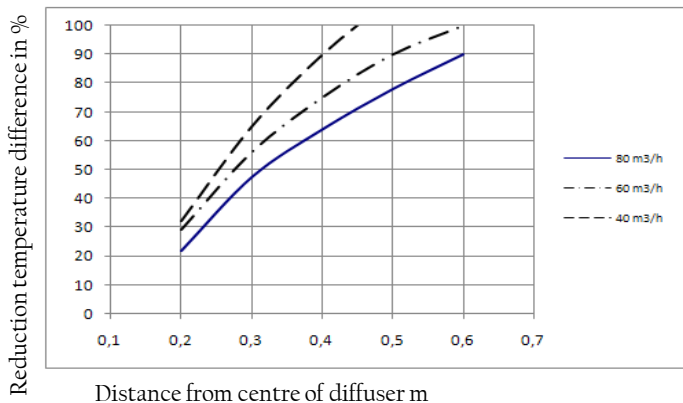


Diagram 3

Characteristics diffusers TE-KP125 TE-160

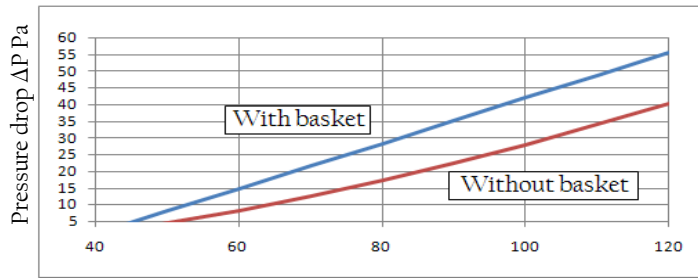
The diagram highlights, for various load values, and in relation to the distance in meters from the centre of the diffuser, the reduction (as percentage) of the difference between injected air and room temperature. The behaviours is identical for both diffuser sizes. The diagram is usable for initial temperature differences between 2°K and 4°K.



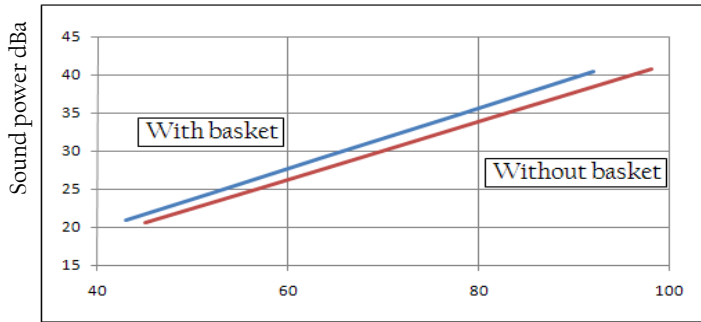
## FLOOR DIFFUSERS

### PERFORMANCES

## TE-KP SERIES



TE-KP125 air flow m³/h



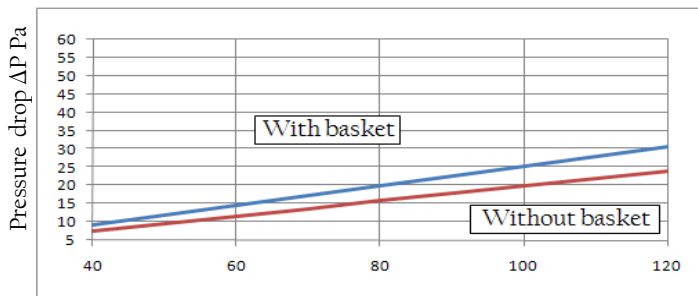
TE-KP125 Portata m³/h

**Diagram 4**

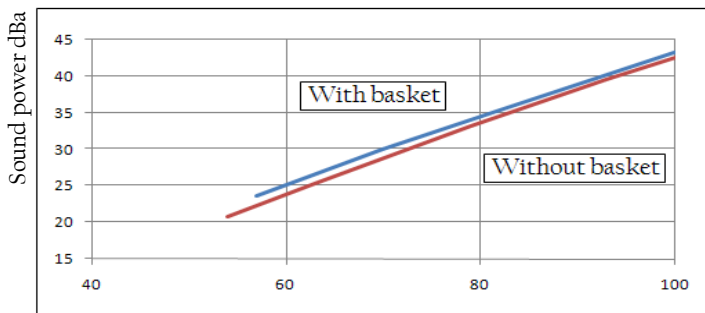
#### Characteristics diffuser TE-KP125

Allow to obtain, in relation to the air flow, the pressure drop in Pa and the sound power in dBa with and without the dust collection basket.

Measurements made with shutter completely open.



TE-KP160 Air flow m³/h



TE-KP160 Air flow m³/h

**Diagram 5**

#### Characteristics diffuser TE-KP160

Allow to obtain, in relation to the air flow, the pressure drop in Pa and the sound power in dBa with and without the dust collection basket.

Measurements made with shutter completely open.



## DIFFUSORI A PAVIMENTO

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### PERFORMANCES

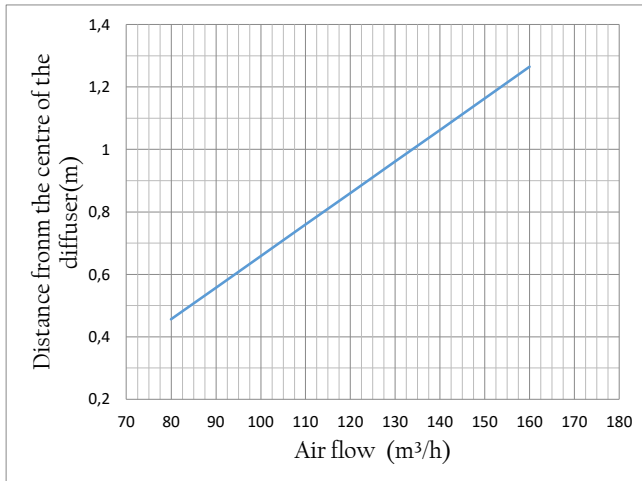


Diagram 6

#### Characteristics diffusers TE-KP225

The diagram highlights, in function of the load, the distance in metres from the centre of the diffuser where a value of 0,2m/s is measured, at a height of 50mm.

es taken with a difference in temperature between injected air and room temperature, equal to 3°K.

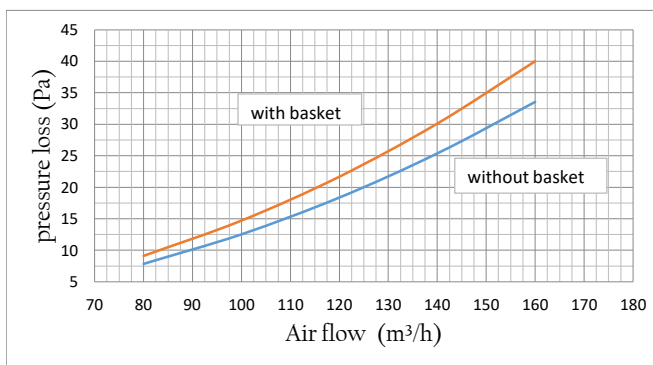
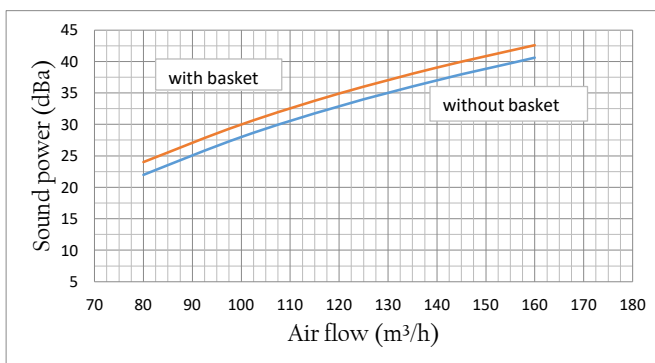


Diagram 7

#### Characteristics diffuser TE-KP225

Allow to obtain, in relation to the air flow, the pressure drop in Pa and the sound power in dBa with and without the dust collection basket.

Measurements made with shutter completely open.



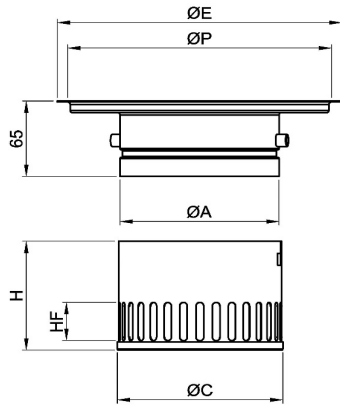


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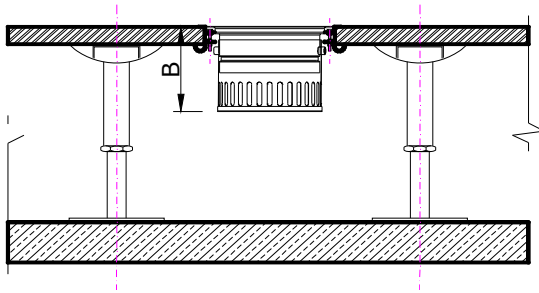
CODES

### MAIN DIMENTIONS

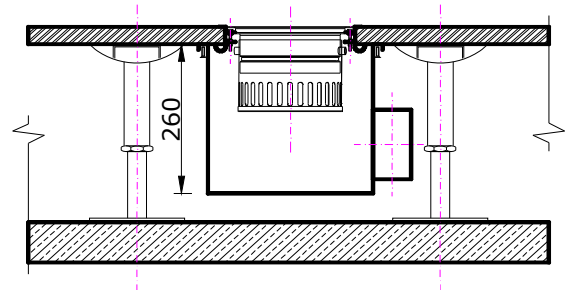


	TE-KP125	TE-KP160	TE-KP225
P	199	199	256
E	220	220	278
A	123	158	223
H	90	125	125
C	130	160	230
HF	33	73	73
B	120	155	155

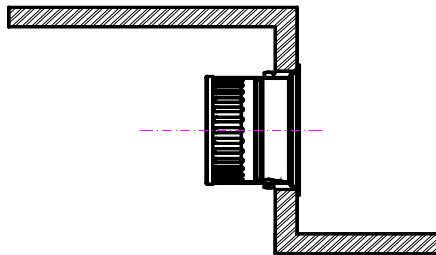
TE-KP Fixing to raised floor



TE-KP Fixing to raised floor with plenum



TE-KP Fixing to step



### CODES

DESCRIPTION	TE-KP125	TE-KP160	TE-KP225
Standard diffuser	TE-KP125D	TE-KP160D	TE-KP225D
Diffuser with stainless steel grilled plate	TE-KP125X	TE-KP160X	TE-KP225X
Dust collection basket	TE-KP125C	TE-KP160C	TE-KP225C
Shutter for basket	TE-KP125S	TE-KP160S	TE-KP225S
Supporting ring for raised floors	TE-KP125-160G	TE-KP125-160G	TE-KP225G
Supporting ring for concrete floors	TE-KP125-160M	TE-KP125-160M	TE-KP225M
Galvanized sheet Plenum with Ø125 connection	TE-KP125-160P	TE-KP125-160P	TE-KP225P

Note : The shutter can not be used without the dust collection basket

