



## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

KM-G  
KM-F  
SERIES

OVERVIEW  
CHARACTERISTICS  
APPLICATIONS

### OVERVIEW :

The KM-F series adjustable multidirectional linear aluminium diffusers represent a tested solution of air diffusion. The direction of the air exiting the diffuser is regulated and controlled by means of a central blade placed inside each slot. this solution allows to precisely adjust in the easiest way possible the horizontal and vertical direction of the flow of air.

The **KM-F** series has been realised to be installed without the use of visible screws.

These diffusers are assembled with up to **4 slots** to accommodate all possible applications.

### APPLICATIONS:

A diffuser suitable for all civil applications in any air mixing ventilation system for medium height installations, between 2.6 and 6 metres.

It allows to heat large spaces or large shopping centre galleries and corridors. The ideal application is close to large windows or even glass walls to prevent the forming of condensation.

### FIXING OF DIFFUSER TO THE CEILING :

The S2 method of fixing (later explained) is done by means of fixing of traction systems between the laterally fixed supports in the body of the diffuser and the ceiling. With the S3 method, using a traction fixing system between the supports fixed directly in the plenum and the ceiling.

### FIXING OF THE DIFFUSER TO THE PLENUM :

The fixing in the S2 system is done by means of laterally autofilleting screws in the body of the diffuser.

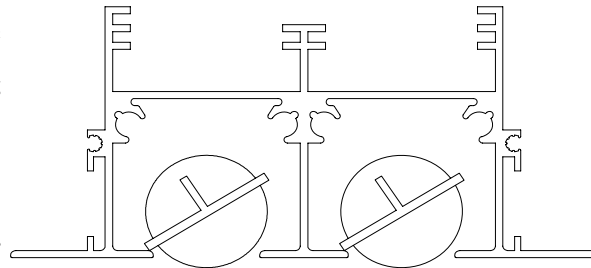
In the S3 system by means of fixing bridges.

### FINISH :

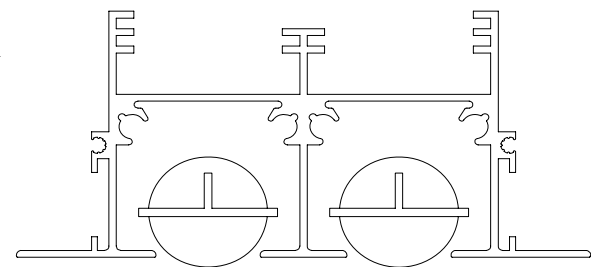
The KM-F series are made in naturally anodized aluminium. On request they can be supplied with an epoxy finishing on the surface, white RAL 9010.

**MATERIALS :** Diffuser in naturally extruded aluminium, deflecting blade in black profile aluminium, black Polypropylene deflecting blade, plenum in galvanized steel, externally isolated in autoextinguishing Polyethylene, certified Class I.

**DAMPER REGULATION :** The calibration damper is actuated by a level inside the diffuser.



Regulation for horizontal throw



Regulation for vertical throw

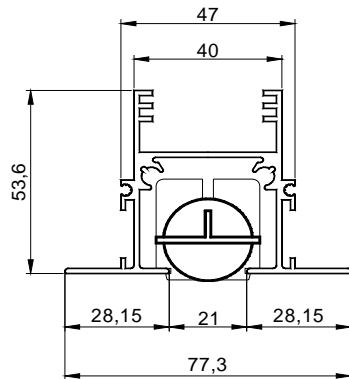


**LINEAR SLOT DIFFUSERS  
WITH DEFLECTORS**

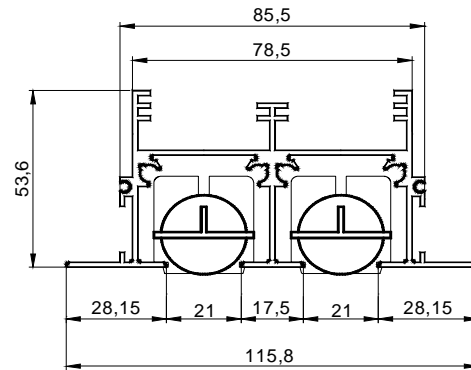
CONSTRUCTION DIAGRAMS

KM-G  
KM-F  
SERIES

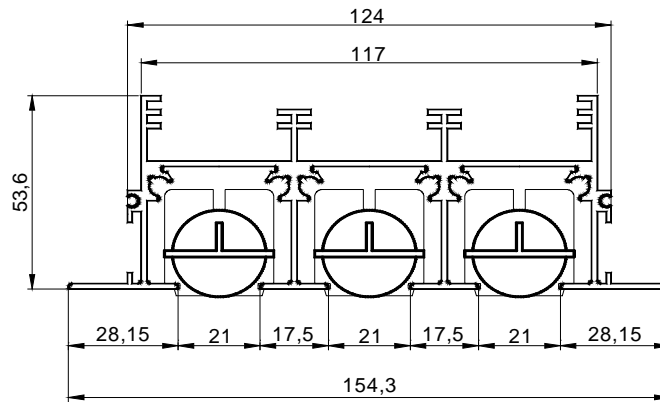
Single slot KM linear diffuser.



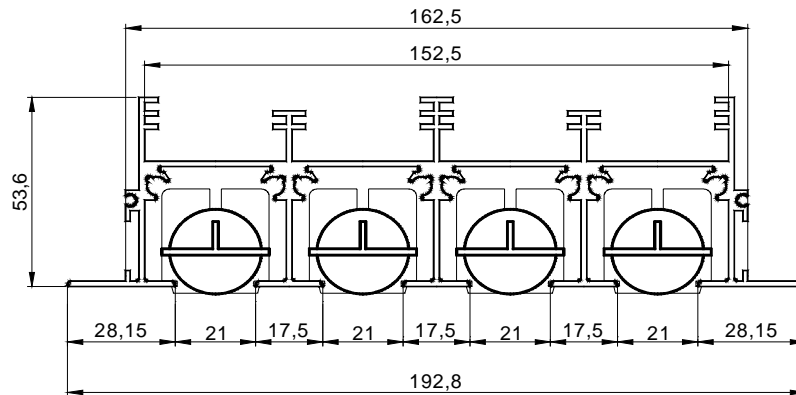
Two slots KM linear diffuser.



Three slots KM linear diffuser.



Four slots KM linear diffuser.



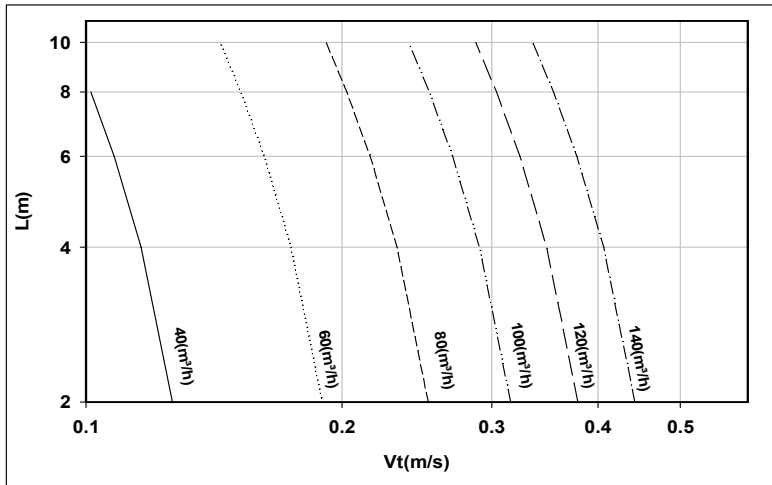


## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

FUNCTIONAL CHARACTERISTICS  
THROW VALUES  
SINGLE SLOT DIFFUSER

KM-G  
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SERIES

SINGLE SLOT DIFFUSER: data based on the height of the ceiling of 3m in isothermal conditions.



### Regulation for horizontal throw

The diagram allows to obtain the air speed at the limit of the occupied area (1,8m from the floor) in relation to the distance **L** between the diffusers and the air flow per meter of the diffuser.

For diffusers with lengths different to 1m the exiting air flow must be regulated divided by the diffuser length shown in metres.

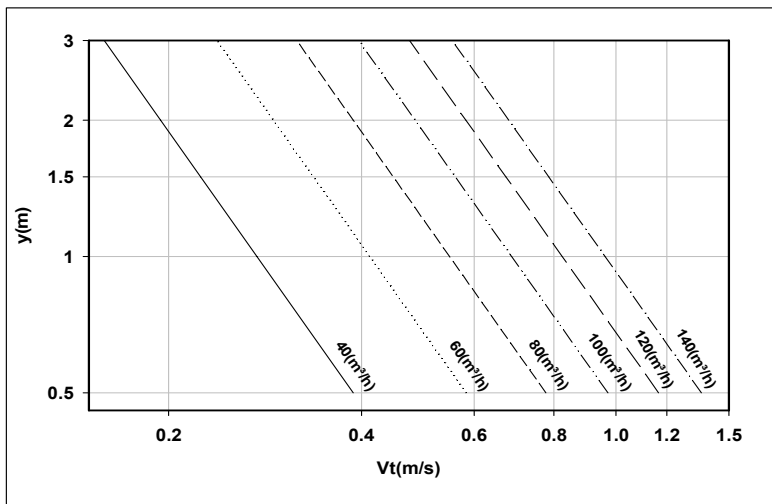
**Example:**

length: 1,5m

air flow: 300m³/h

$300 / 1,5 = 200$

air flow per metre: 200m³/h



### Regulation for vertical throw

The diagram allows to obtain the air speed in variation to the distance from the diffuser.

For diffusers with lengths different to 1m the exiting air flow must be regulated divided by the diffuser length shown in metres.

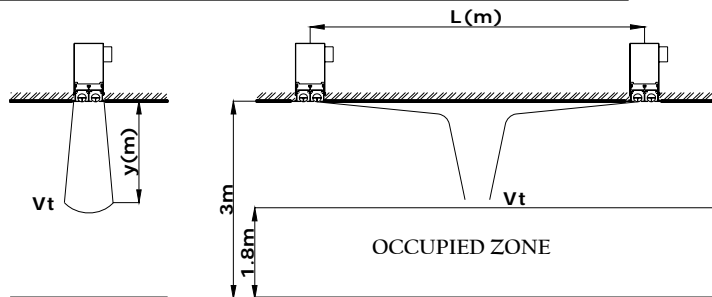
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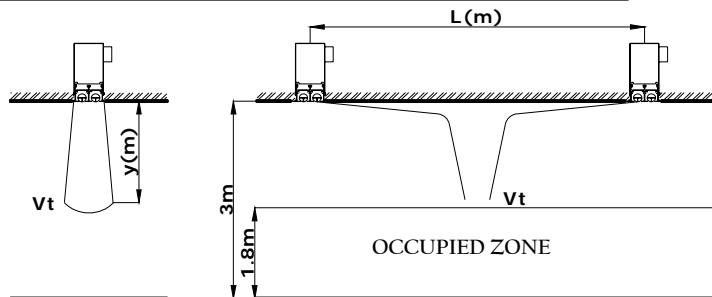
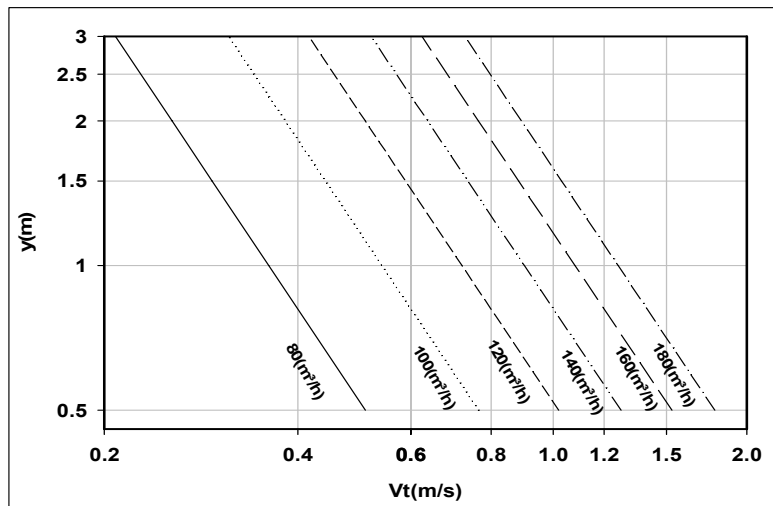
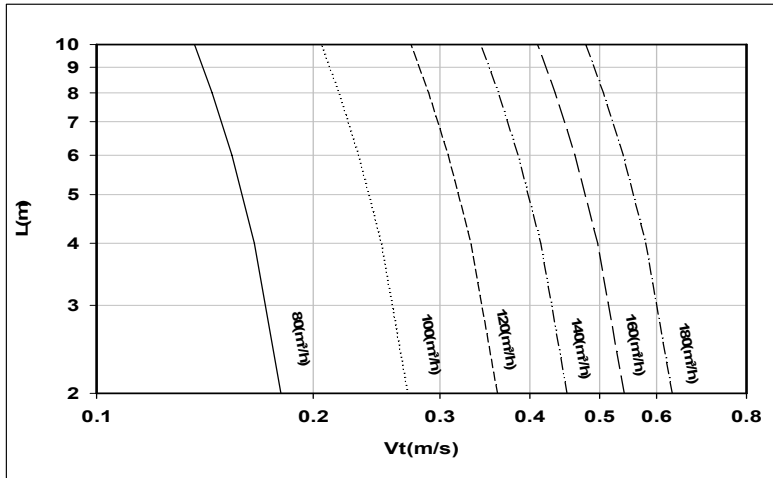


## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

FUNCTIONAL CHARACTERISTICS  
THROW VALUES  
TWO SLOTS DIFFUSER

KM-G  
KM-F  
SERIES

TWO SLOTS DIFFUSER: data based on the height of the ceiling of 3m in isothermal conditions.



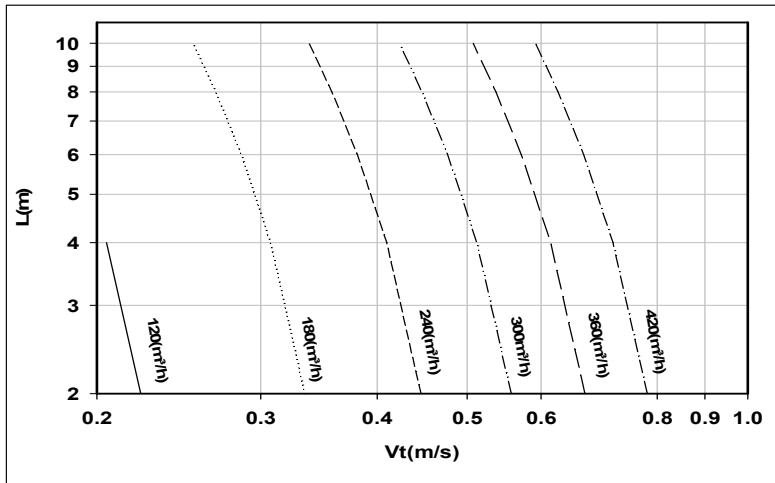


**LINEAR SLOT DIFFUSERS  
WITH DEFLECTORS**

**FUNCTIONAL CHARACTERISTICS  
THROW VALUES  
THREE SLOTS DIFFUSER**

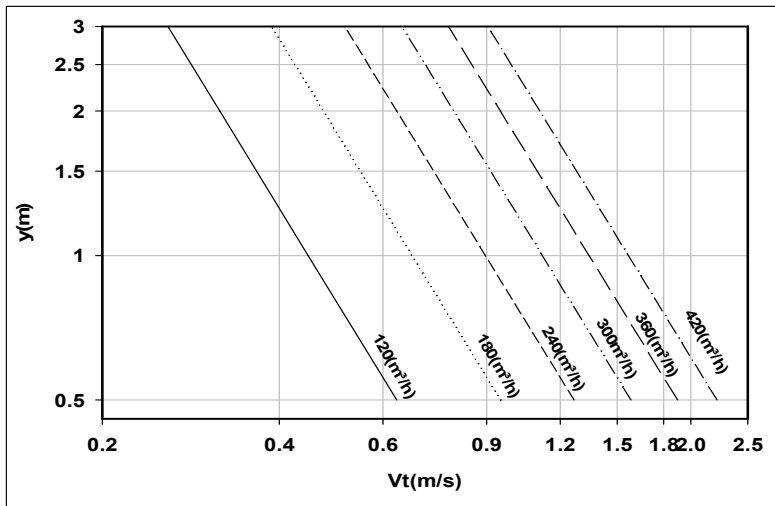
KM-G  
KM-F  
SERIES

THREE SLOTS DIFFUSER: data based on the height of the ceiling of 3m in isothermal conditions.



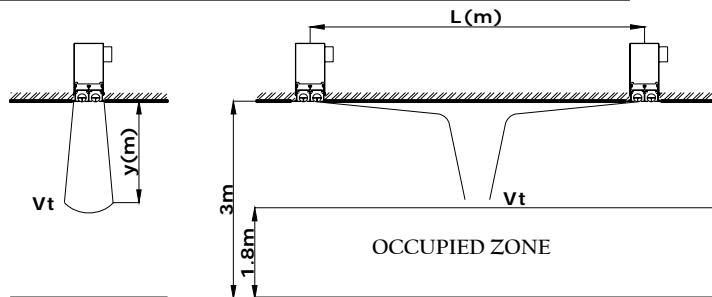
**Regulation for horizontal throw**  
The diagram allows to obtain the air speed at the limit of the occupied area (1,8m from the floor) in relation to the distance L between the diffusers and the air flow per meter of the diffuser.  
For diffusers with lengths different to 1m the exiting air flow must be regulated divided by the diffuser length shown in metres.

**Example:**  
length: 1,5m  
air flow: 300m³/h  
 $300 / 1,5 = 200$   
air flow per metre: 200m³/h



**Regulation for vertical throw**  
The diagram allows to obtain the air speed in variation to the distance from the diffuser.  
For diffusers with lengths different to 1m the exiting air flow must be regulated divided by the diffuser length shown in metres.

**Example:**  
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air flow: 300m³/h  
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air flow per metre: 200m³/h





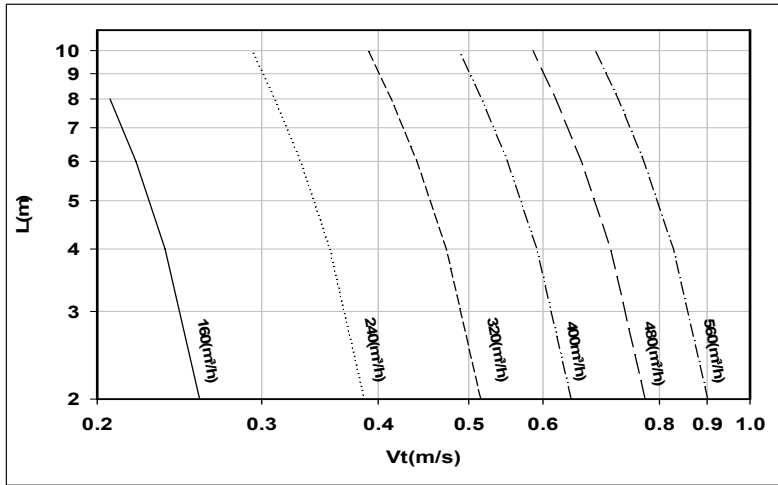
## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

KM-G  
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SERIES

FUNCTIONAL CHARACTERISTICS  
THROW VALUES  
SLOTS DIFFUSER

FOUR

FOUR SLOTS DIFFUSER: data based on the height of the ceiling of 3m in isothermal conditions.

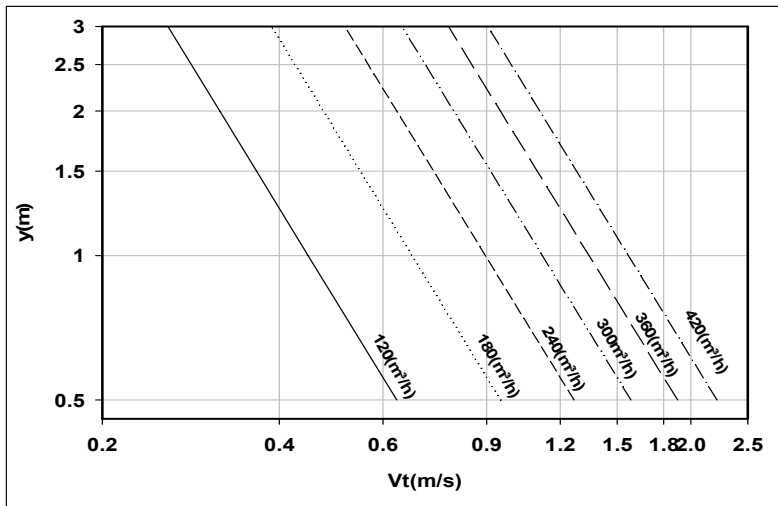


### Regulation for horizontal throw

The diagram allows to obtain the air speed at the limit of the occupied area (1,8m from the floor) in relation to the distance L between the diffusers and the air flow per meter of the diffuser. For diffusers with lengths different to 1m the exiting air flow must be regulated divided by the diffuser length shown in metres.

#### Example:

length: 1,5m  
air flow: 300m<sup>3</sup>/h  
 $300 / 1,5 = 200$   
air flow per metre: 200m<sup>3</sup>/h

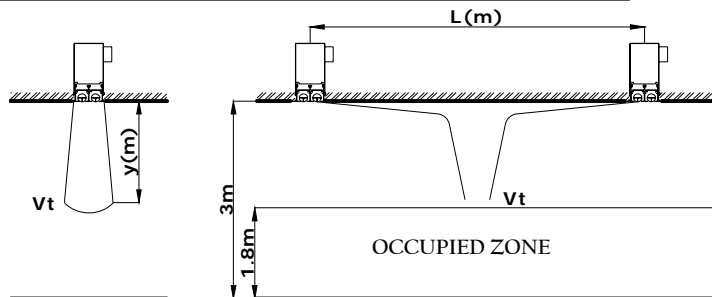


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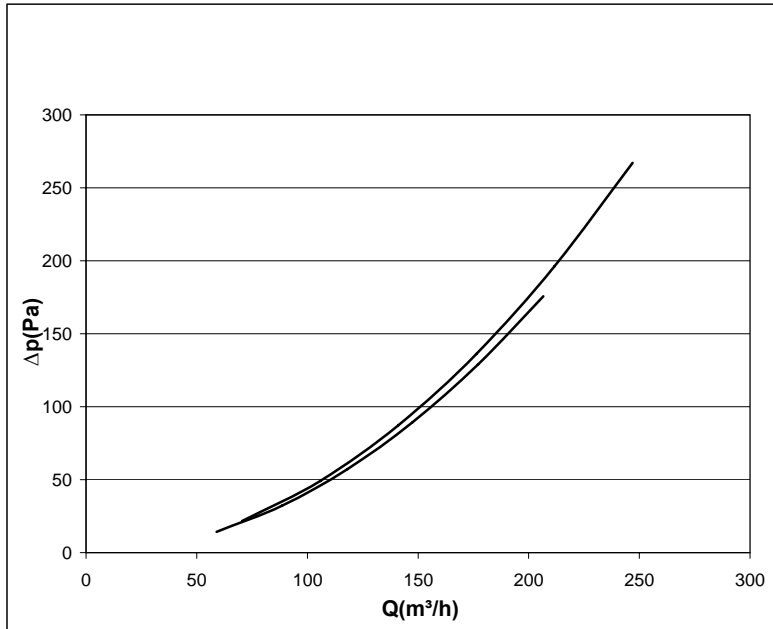




**LINEAR SLOT DIFFUSERS  
WITH DEFLECTORS**

**FUCTIONAL CHARACTERISTIC  
AIR FLOW LOSS**

**KM-G  
KM-F  
SERIES**



**Single slot diffuser**

The diagrams allows to obtain the pressure loss per linear metre of the diffuser in relation to the air flow in both the conditions of regulation of the deflecting blade.

The regulation for a horizontal thouw allows larger air flows.

**Vertical throw:** horizontal blade  
**Horizontal throw:** completely tilted blade

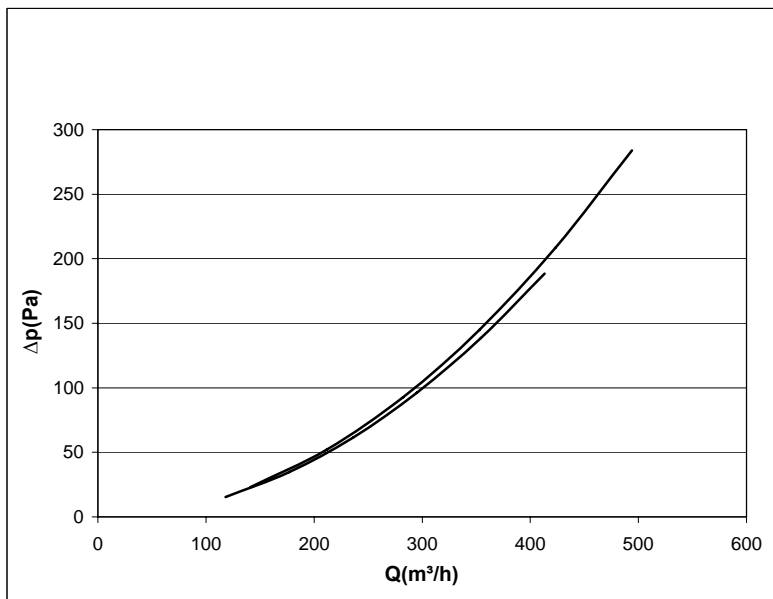
For diffuser lengths differnt to one metre, consider the air flow per metre of diffuser.

**Example:**

length: 1,5m

air flow: 300m³/h

air flow per metre: 200m³/h



**Single slot diffuser**

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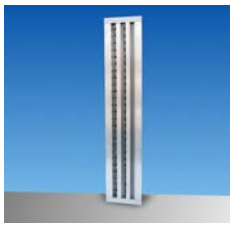
For diffuser lengths differnt to one metre, consider the air flow per metre of diffuser.

**Example:**

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air flow: 300m³/h

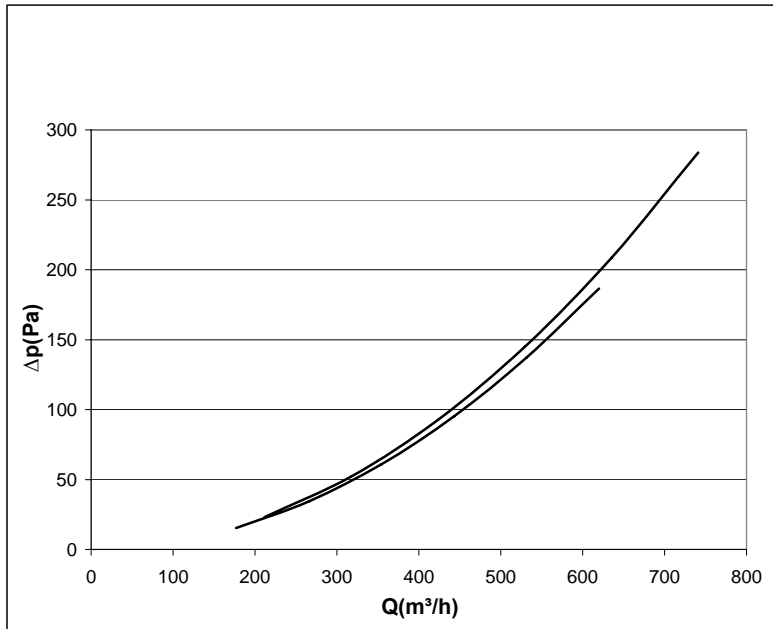
air flow per metre: 200m³/h



**LINEAR SLOT DIFFUSERS  
WITH DEFLECTORS**

**FUCTIONAL CHARACTERISTIC  
AIR FLOW LOSS**

**KM-G  
KM-F  
SERIES**



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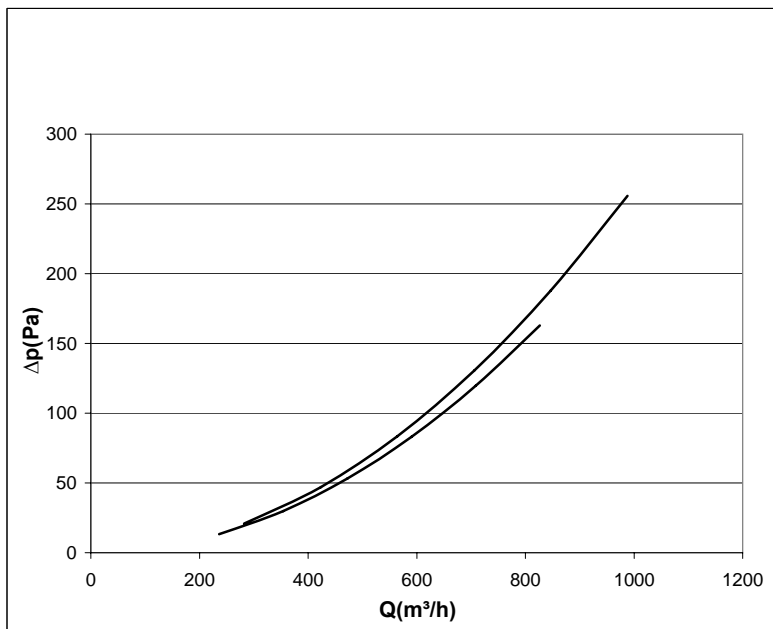
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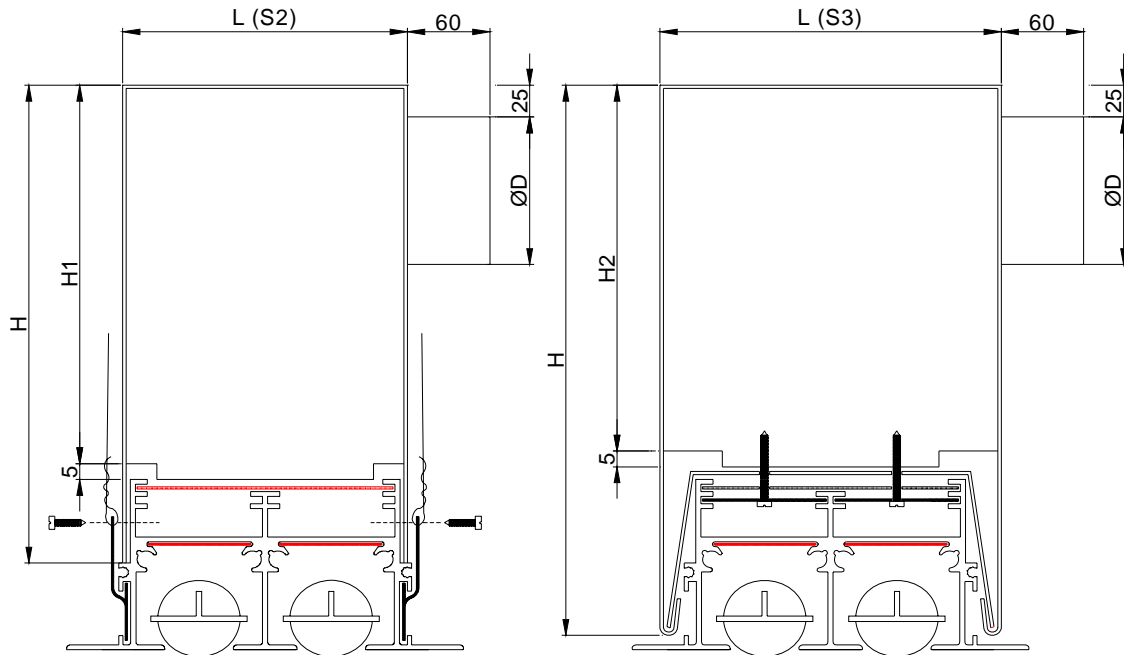




**LINEAR SLOT DIFFUSERS  
WITH DEFLECTORS**

INSTALLATION CHARACTERISTICS  
PLENUM CONNECTION

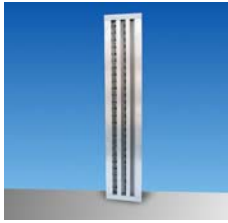
KM-G  
KM-F  
SERIES



Fixing type S2

Fixing type S3

N° slots	ØD	H	H1	H2	L (S3)	L (S2)
1	156	300	270	240	60	45
2	196	300	270	240	98	83
3	196	300	270	240	137	121
4	246	300	270	240	175	160



## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

KM-G  
KM-F  
SERIES

AVAILABLE SIZES  
ORDERING CODES

HOW TO ORDER - NATURAL ALUMINIUM SERIES			
KM	X	X	X
Linear Diffuser	Accessories F= with damper G= without damper	Slot number 1 - 2 - 3 - 4	Length Length in mm

KM-F1-800	Linear diffuser with deflectors 1 slot L=800mm with regulation damper
KM-F1-1000	Linear diffuser with deflectors 1 slot L=1000mm with regulation damper
KM-F1-1500	Linear diffuser with deflectors 1 slot L=1500mm with regulation damper
KM-F1-2000	Linear diffuser with deflectors 1 slot L=2000mm with regulation damper

KM-G1-800	Linear diffuser with deflectors 1 slot L=800mm without regulation damper
KM-G1-1000	Linear diffuser with deflectors 1 slot L=1000mm without regulation damper
KM-G1-1500	Linear diffuser with deflectors 1 slot L=1500mm without regulation damper
KM-G1-2000	Linear diffuser with deflectors 1 slot L=2000mm without regulation damper

KM-F2-800	Linear diffuser with deflectors 2 slots L=800mm with regulation damper
KM-F2-1000	Linear diffuser with deflectors 2 slots L=1000mm with regulation damper
KM-F2-1500	Linear diffuser with deflectors 2 slots L=1500mm with regulation damper
KM-F2-2000	Linear diffuser with deflectors 2 slots L=2000mm with regulation damper

KM-G2-800	Linear diffuser with deflectors 2 slots L=800mm without regulation damper
KM-G2-1000	Linear diffuser with deflectors 2 slots L=1000mm without regulation damper
KM-G2-1500	Linear diffuser with deflectors 2 slots L=1500mm without regulation damper
KM-G2-2000	Linear diffuser with deflectors 2 slots L=2000mm without regulation damper

KM-F3-800	Linear diffuser with deflectors 3 slots L=800mm with regulation damper
KM-F3-1000	Linear diffuser with deflectors 3 slots L=1000mm with regulation damper
KM-F3-1500	Linear diffuser with deflectors 3 slots L=1500mm with regulation damper
KM-F3-2000	Linear diffuser with deflectors 3 slots L=2000mm with regulation damper

KM-G3-800	Linear diffuser with deflectors 3 slots L=800mm without regulation damper
KM-G3-1000	Linear diffuser with deflectors 3 slots L=1000mm without regulation damper
KM-G3-1500	Linear diffuser with deflectors 3 slots L=1500mm without regulation damper
KM-G3-2000	Linear diffuser with deflectors 3 slots L=2000mm without regulation damper

KM-F4-800	Linear diffuser with deflectors 4 slots L=800mm with regulation damper
KM-F4-1000	Linear diffuser with deflectors 4 slots L=1000mm with regulation damper
KM-F4-1500	Linear diffuser with deflectors 4 slots L=1500mm with regulation damper
KM-F4-2000	Linear diffuser with deflectors 4 slots L=2000mm with regulation damper

KM-G4-800R	Linear diffuser with deflectors 4 slots L=800mm without regulation damper
KM-G4-1000R	Linear diffuser with deflectors 4 slots L=1000mm without regulation damper
KM-G4-1500R	Linear diffuser with deflectors 4 slots L=1500mm without regulation damper
KM-G4-2000R	Linear diffuser with deflectors 4 slots L=2000mm without regulation damper

SPECIAL LENGTHS ON REQUEST: MINIMUM 600mm MAXIMUM 2000mm



## LINEAR SLOT DIFFUSERS WITH DEFLECTORS

KM-G  
KM-F  
SERIES

AVAILABLE SIZES  
ORDERING CODES

HOW TO ORDER - RAL 9010 PAINTED SERIES				
KM	X	X	X	R
Linear Diffuser	Accessories F= with damper G= without damper	slots number 1 - 2 - 3 - 4	Length length in mm	Finish R=RAL 9010

KM-F1-800R	Linear diffuser with deflectors 1 slot L=800mm without regulation damper painted RAL 9010
KM-F1-1000R	Linear diffuser with deflectors 1 slot L=1000mm without regulation damper painted RAL 9010
KM-F1-1500R	Linear diffuser with deflectors 1 slot L=1500mm without regulation damper painted RAL 9010
KM-F1-2000R	Linear diffuser with deflectors 1 slot L=2000mm without regulation damper painted RAL 9010
KM-G1-800R	Linear diffuser with deflectors 1 slot L=800mm without regulation damper painted RAL 9010
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KM-G1-1500R	Linear diffuser with deflectors 1 slot L=1500mm without regulation damper painted RAL 9010
KM-G1-2000R	Linear diffuser with deflectors 1 slot L=2000mm without regulation damper painted RAL 9010
KM-F2-800R	Linear diffuser with deflectors 2 slots L=800mm with regulation damper painted RAL 9010
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KM-F2-2000R	Linear diffuser with deflectors 2 slots L=2000mm with regulation damper painted RAL 9010
KM-G2-800R	Linear diffuser with deflectors 2 slots L=800mm without regulation damper painted RAL 9010
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KM-F3-800R	Linear diffuser with deflectors 3 slots L=800mm with regulation damper painted RAL 9010
KM-F3-1000R	Linear diffuser with deflectors 3 slots L=1000mm with regulation damper painted RAL 9010
KM-F3-1500R	Linear diffuser with deflectors 3 slots L=1500mm with regulation damper painted RAL 9010
KM-F3-2000R	Linear diffuser with deflectors 3 slots L=2000mm with regulation damper painted RAL 9010
KM-G3-800R	Linear diffuser with deflectors 3 slots L=800mm without regulation damper painted RAL 9010
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KM-G3-1500R	Linear diffuser with deflectors 3 slots L=1500mm without regulation damper painted RAL 9010
KM-G3-2000R	Linear diffuser with deflectors 3 slots L=2000mm without regulation damper painted RAL 9010
KM-F4-800R	Linear diffuser with deflectors 4 slots L=800mm with regulation damper painted RAL 9010
KM-F4-1000R	Linear diffuser with deflectors 4 slots L=1000mm with regulation damper painted RAL 9010
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SPECIAL LENGTHS ON REQUEST: MINIMUM 600mm MAXIMUM 2000mm

