



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN  
SERIES

### OVERVIEW AND TECHNICAL DATA

#### TECHNICAL DATA

The multidirectional square and rectangular diffusers KN series in aluminum have an effective inductive capacity and are ideal for all those situations with large temperature differences.

These are made with the removable central part to be able to be installed without the use of any particular subframe. The diffusion of the air flow can be directional and asymmetrical and guarantees a correct operation of the installation heights from a minimum of 2.5 meters to a maximum of 4.5 meters. The speakers in question are realized in 6 combinations to satisfy all the possible applications. These are listed as follows: 4-way, 3-way, 2-way corner, two opposite ways, one way.

#### FIXING

Fixing is by means of hidden screws from the side of the neck of the diffuser.

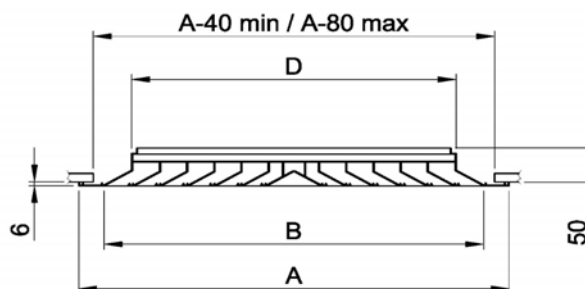
#### FINISH STANDARD

The KN Series speakers are built in the same way both in natural anodized aluminum, either with epoxy powder treatment RAL 9010 colored surface.

#### UNSUITABLE ENVIRONMENTS

The aluminum products are not suitable for installation in environments with an atmosphere containing corrosive substances for this material and in particular containing chlorine, such as swimming pools, spas and some types of food industries.

NOMINAL	A mm	B mm	D mm
150	294	224	148
225	369	299	223
300	444	374	298
375	519	449	373
450	594	524	448
525	669	599	523
600	744	674	598

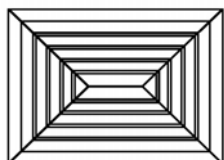




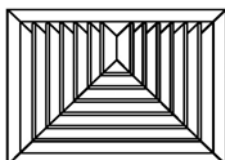
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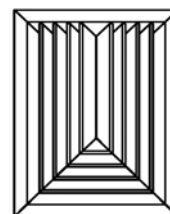
OVERVIEW AND TECHNICAL DATA



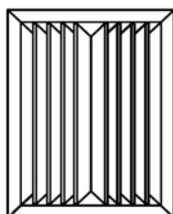
KN40



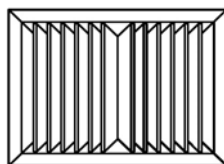
KN30



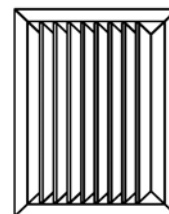
KN31



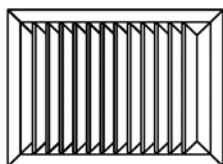
KN26



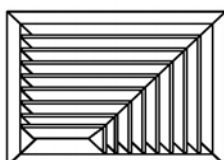
KN27



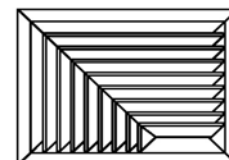
KN11



KN12



KN21



KN22



# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

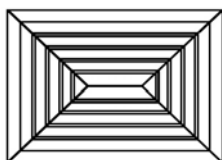
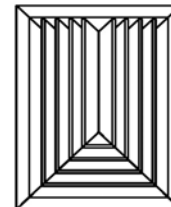
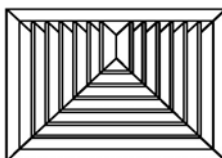
KN  
SERIES

## OVERVIEW AND TECHNICAL DATA

EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN40 225x150	0,014
KN40 300x150	0,018
KN40 300x225	0,027
KN40 375x225	0,034
KN40 450x225	0,041
KN40 525x225	0,047
KN40 375x300	0,045
KN40 450x300	0,054
KN40 525x300	0,063
KN40 600x300	0,073
KN40 450x375	0,068
KN40 600x375	0,091
KN40 600x450	0,110

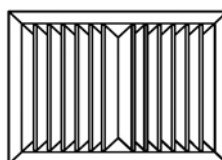
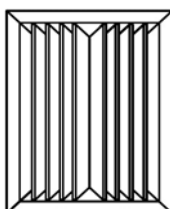
EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN30 225x150	0,014
KN30 300x150	0,018
KN30 300x225	0,027
KN30 375x225	0,034
KN30 375x300	0,047
KN30 450x300	0,055
KN30 450x375	0,065

EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN31 150x225	0,014
KN31 150x300	0,018
KN31 225x300	0,027
KN31 225x375	0,034
KN31 300x375	0,047
KN31 300x450	0,055
KN31 375x450	0,065



EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN26 225x150	0,012
KN26 300x150	0,016
KN26 375x150	0,020
KN26 300x225	0,024
KN26 375x225	0,030
KN26 450x225	0,036
KN26 525x225	0,041
KN26 375x300	0,039
KN26 450x300	0,047

EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN27 225x150	0,012
KN27 300x150	0,016
KN27 375x150	0,020
KN27 300x225	0,024
KN27 375x225	0,030
KN27 450x225	0,036
KN27 525x225	0,041
KN27 375x300	0,039
KN27 450x300	0,047





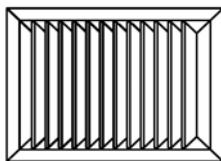
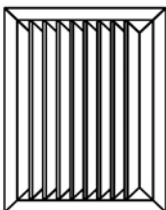
## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN  
SERIES

### OVERVIEW AND TECHNICAL DATA

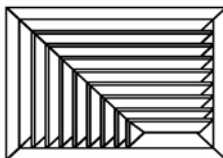
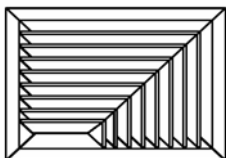
EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN11 225x150	0,014
KN11 300x150	0,019
KN11 375x150	0,024
KN11 300x225	0,029
KN11 375x225	0,036
KN11 450x225	0,043
KN11 525x225	0,050
KN11 375x300	0,048
KN11 450x300	0,058
KN11 525x300	0,067
KN11 600x300	0,077
KN11 450x375	0,072
KN11 600x375	0,096
KN11 600x450	0,115

EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN12 225x150	0,014
KN12 300x150	0,019
KN12 375x150	0,024
KN12 300x225	0,029
KN12 375x225	0,036
KN12 450x225	0,043
KN12 525x225	0,050
KN12 375x300	0,048
KN12 450x300	0,058
KN12 525x300	0,067
KN12 600x300	0,077
KN12 450x375	0,072
KN12 600x375	0,096
KN12 600x450	0,115



EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN21 225x150	0,012
KN21 300x150	0,016
KN21 300x225	0,025
KN21 375x225	0,031
KN21 450x225	0,036
KN21 375x300	0,039
KN21 450x300	0,047

EFFECTIVE AREA	
MODELLO	Ak m <sup>2</sup>
KN22 225x150	0,012
KN22 300x150	0,016
KN22 300x225	0,025
KN22 375x225	0,031
KN22 450x225	0,036
KN22 375x300	0,039
KN22 450x300	0,047

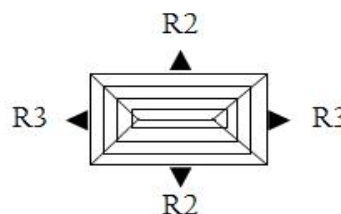
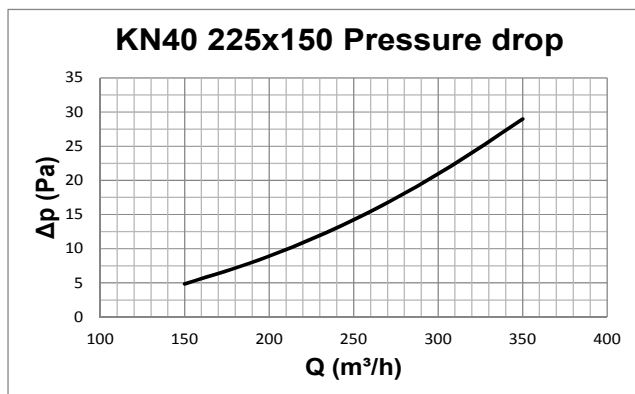
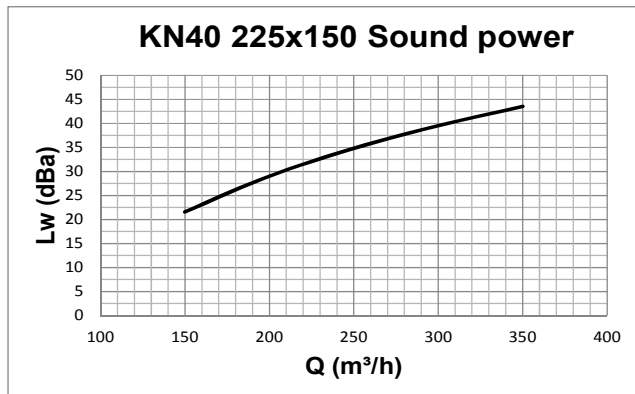
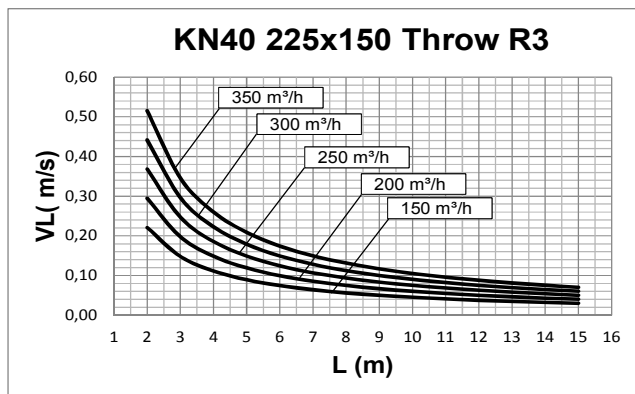
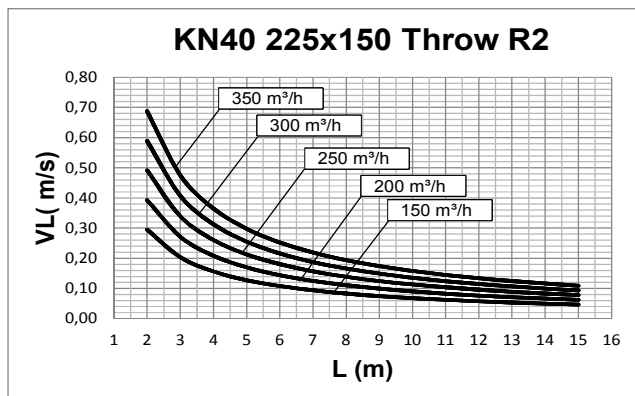




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 225x150



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

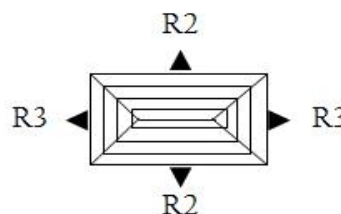
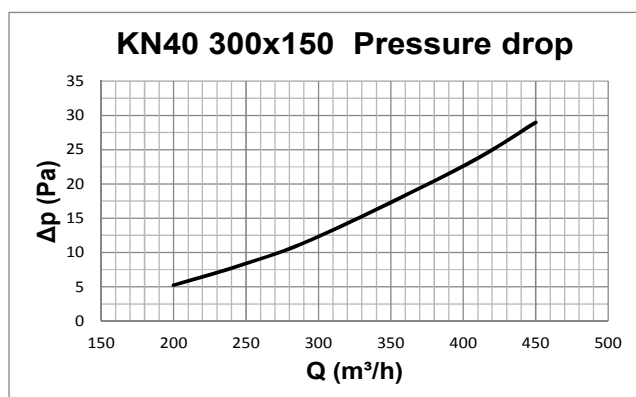
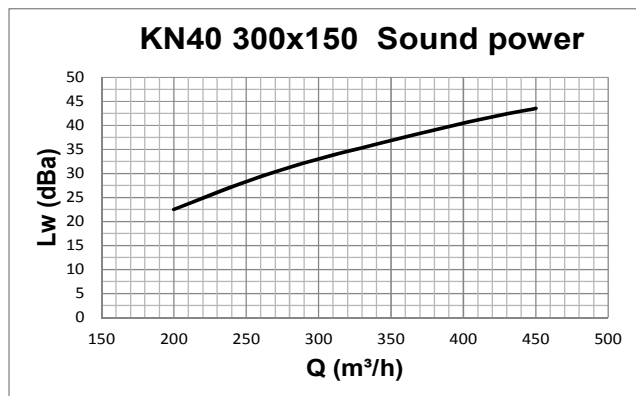
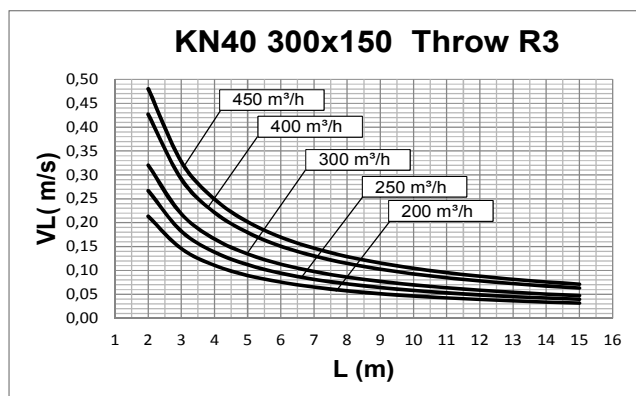
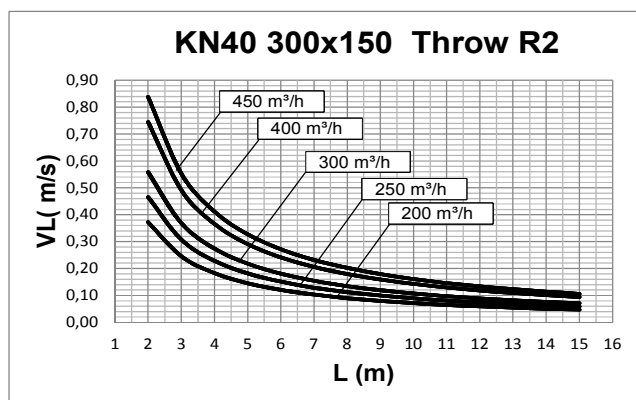
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 300x150



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

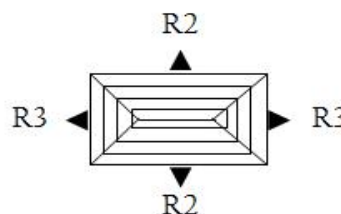
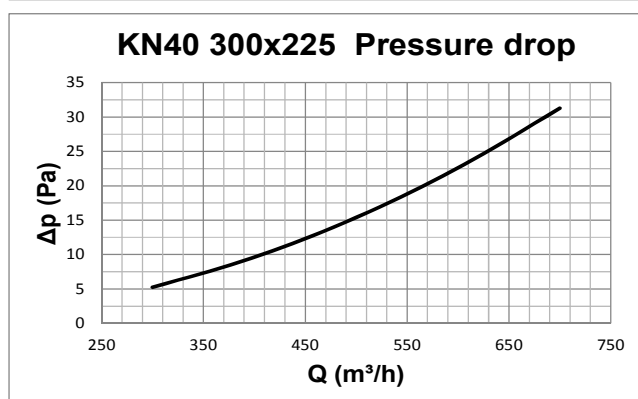
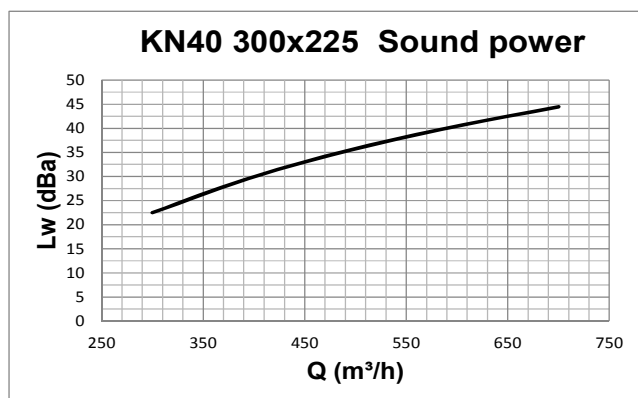
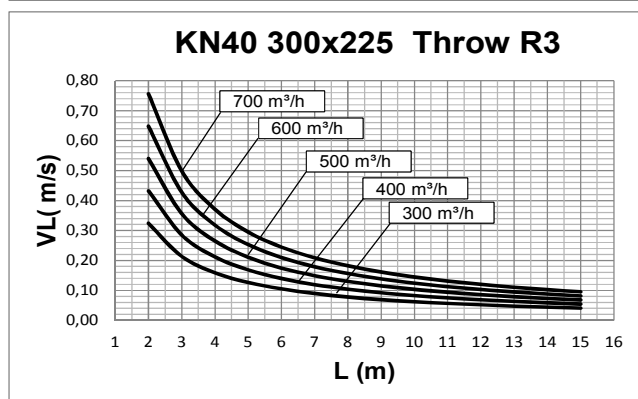
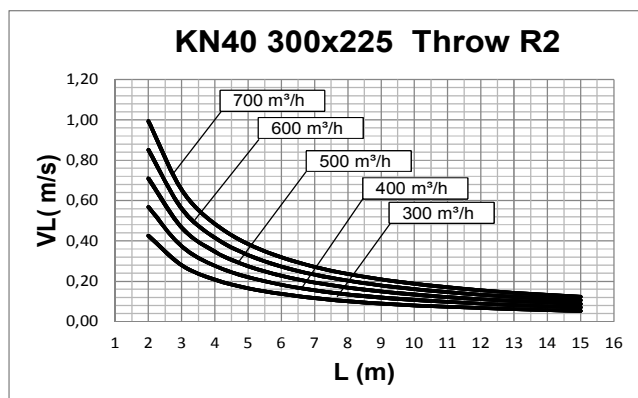
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 300x225



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

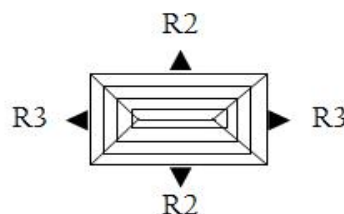
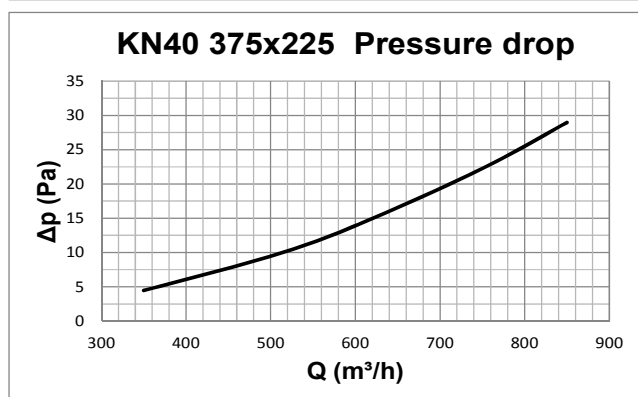
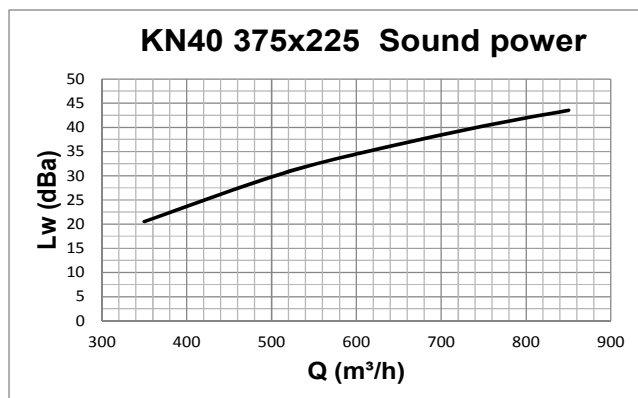
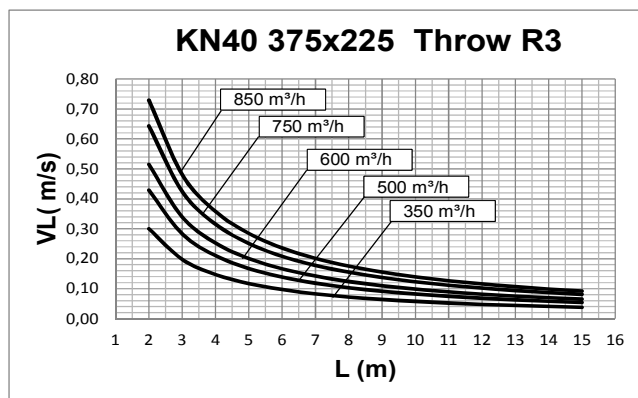
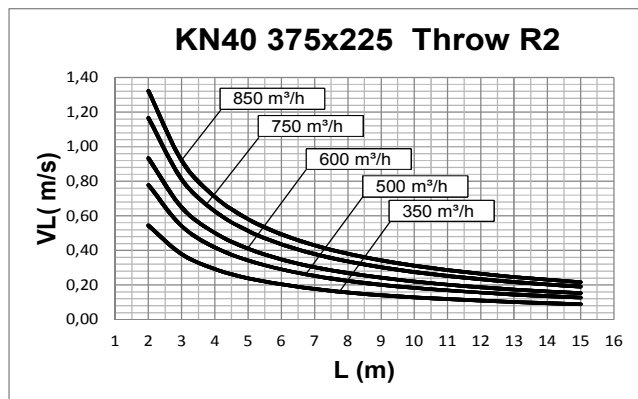
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## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 375x225



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

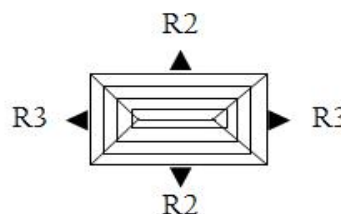
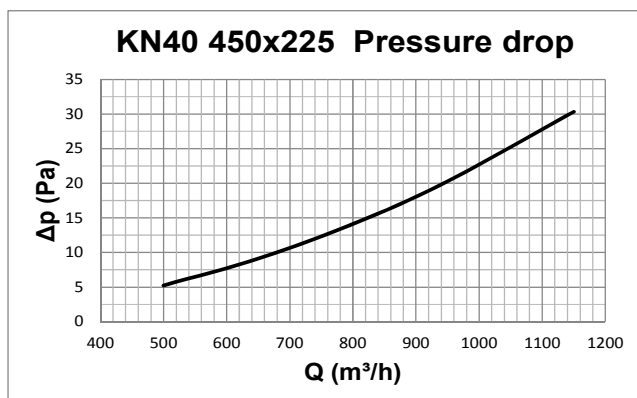
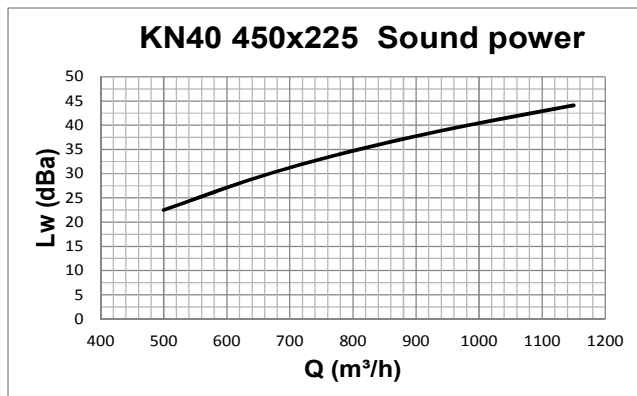
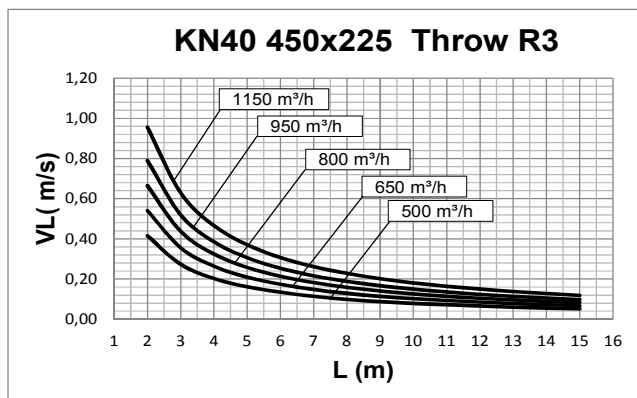
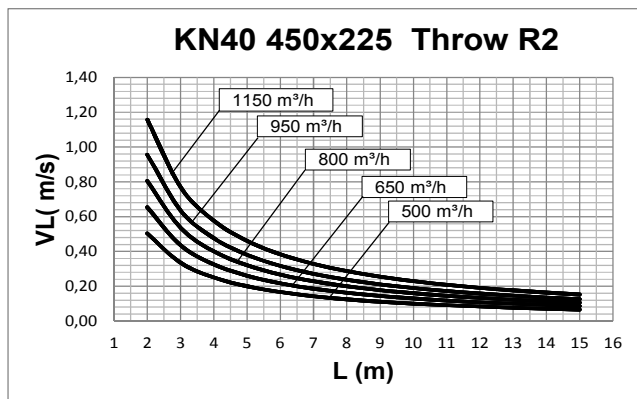




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 450x225



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

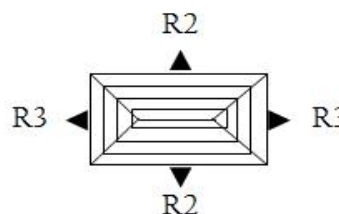
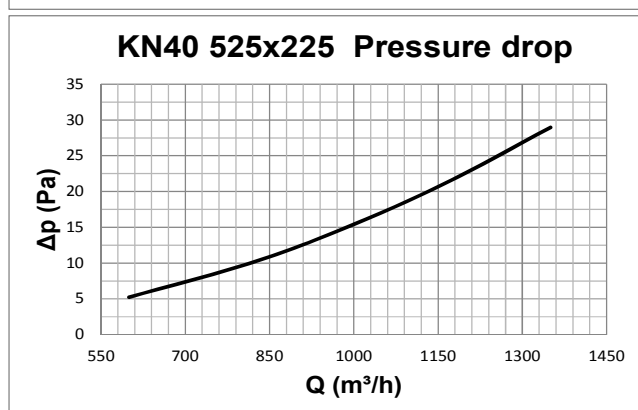
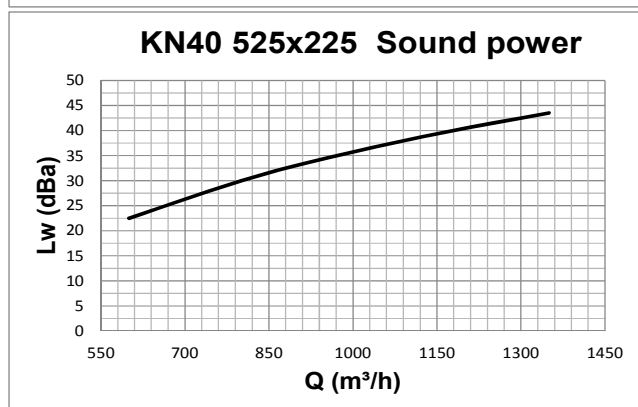
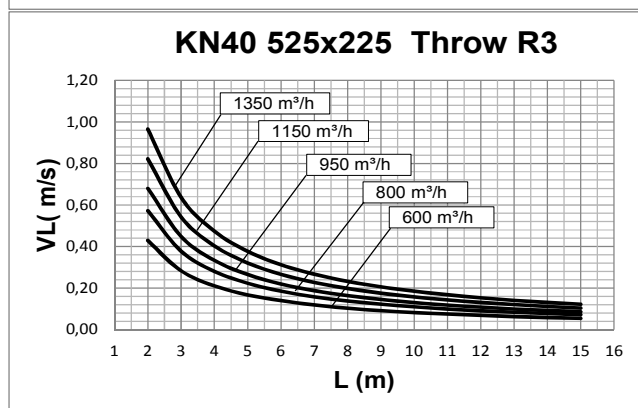
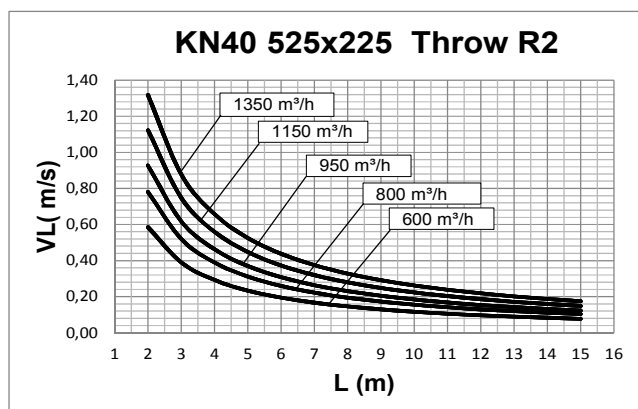
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 525x225



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

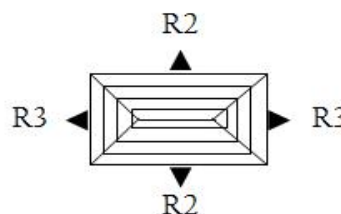
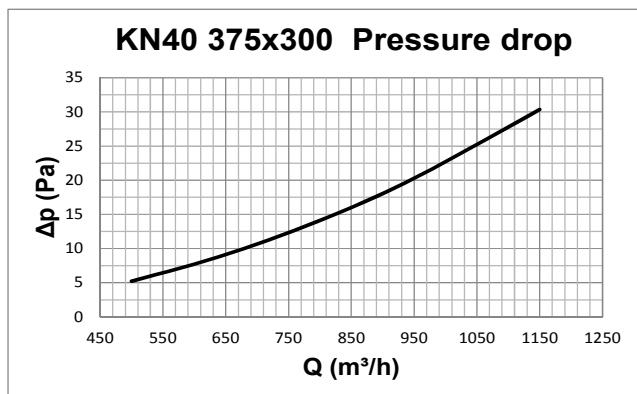
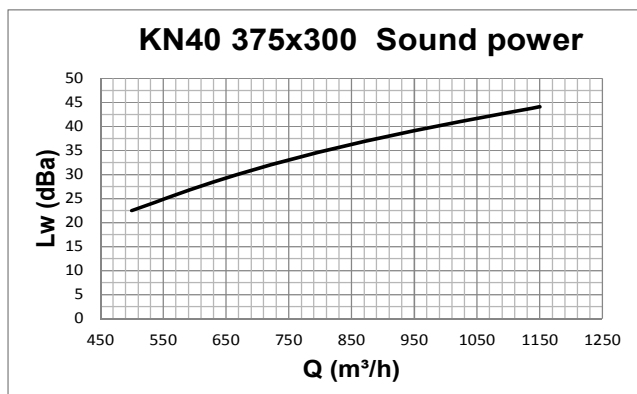
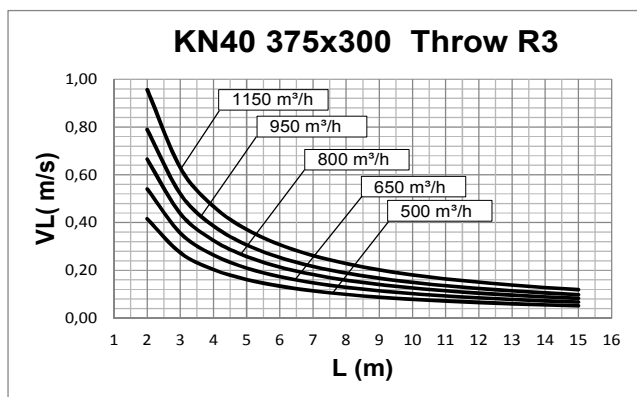
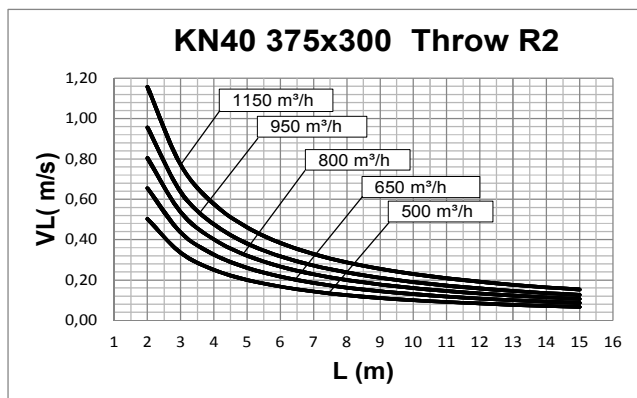
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## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 375x300



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

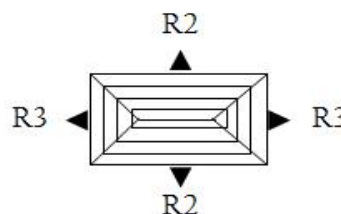
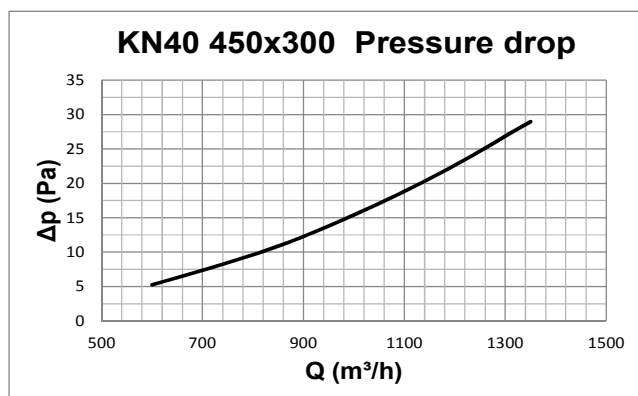
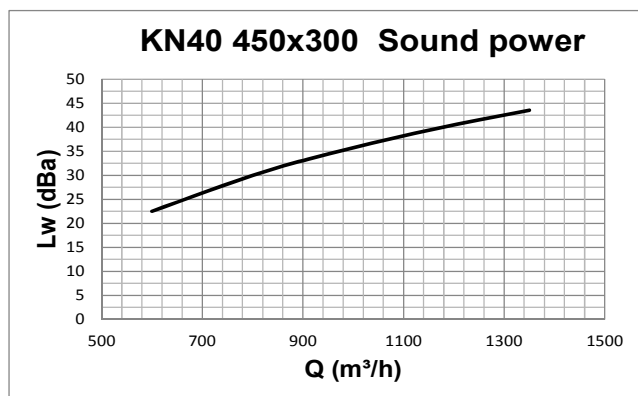
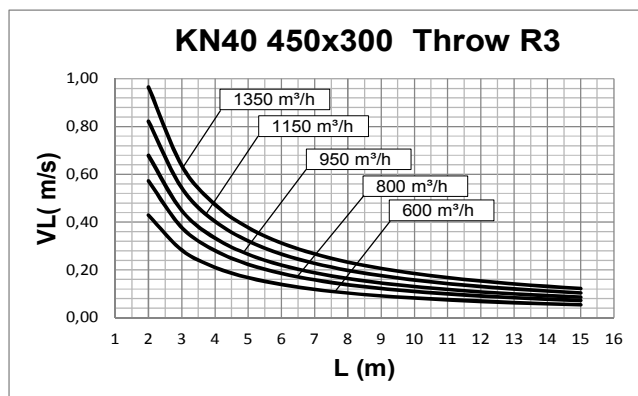
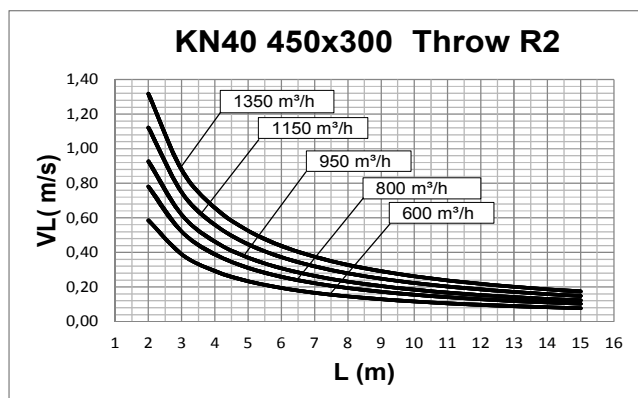
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 450x300



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

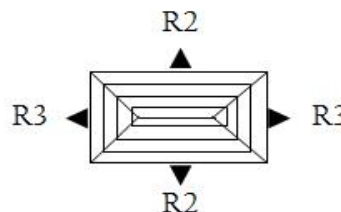
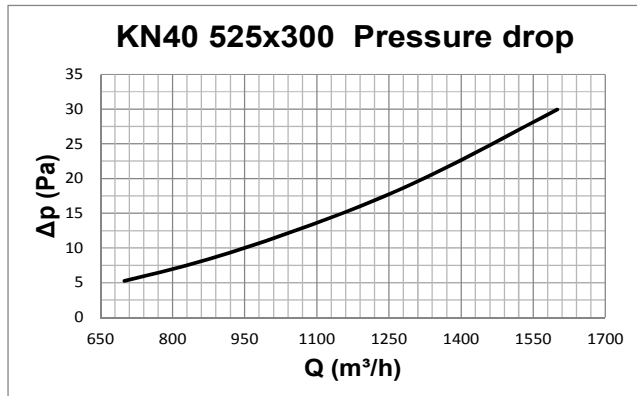
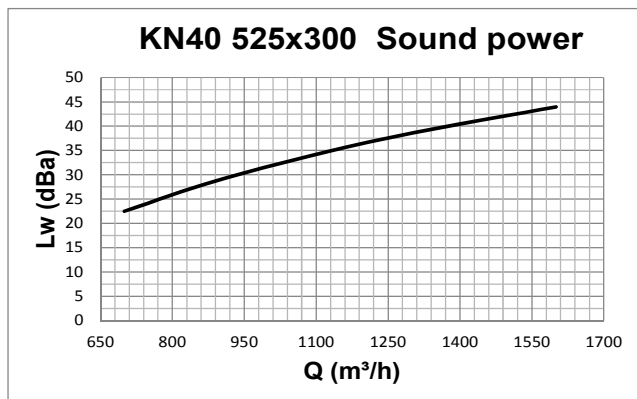
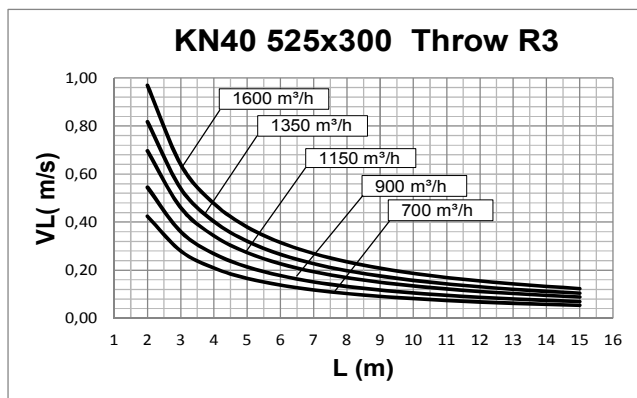
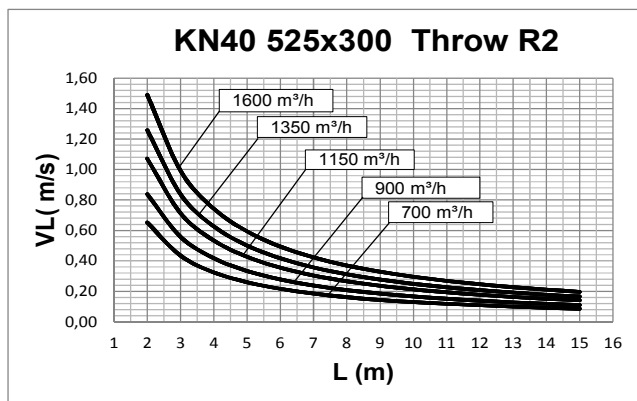
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 525x300



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

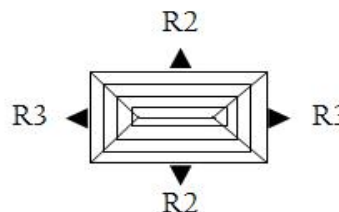
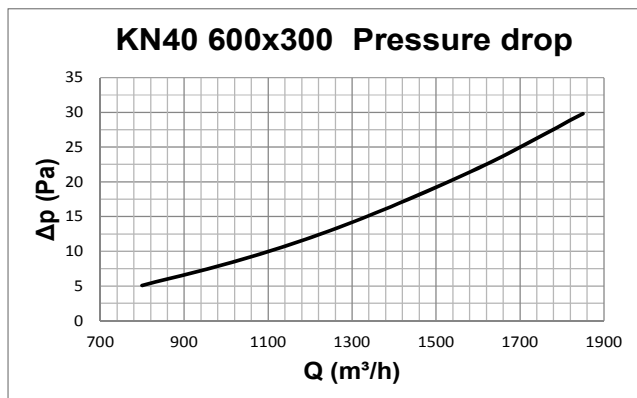
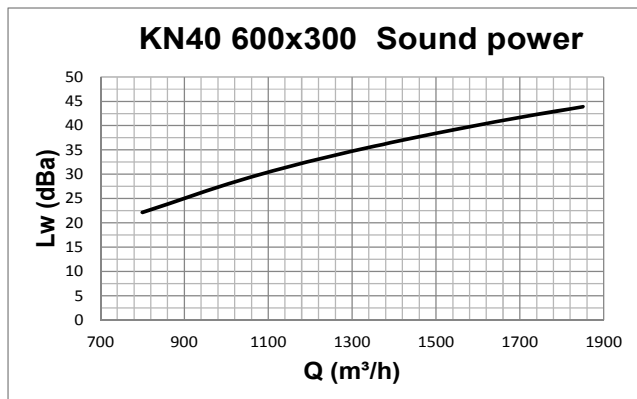
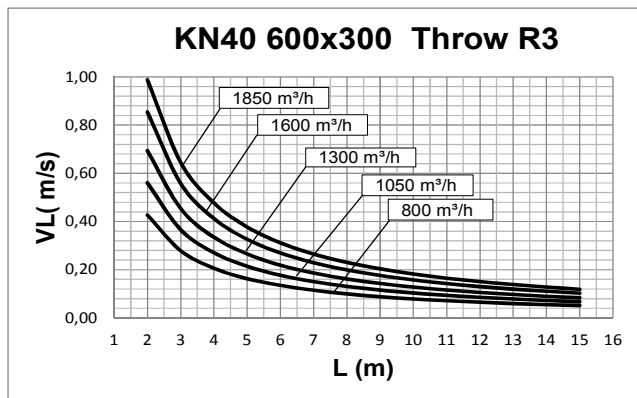
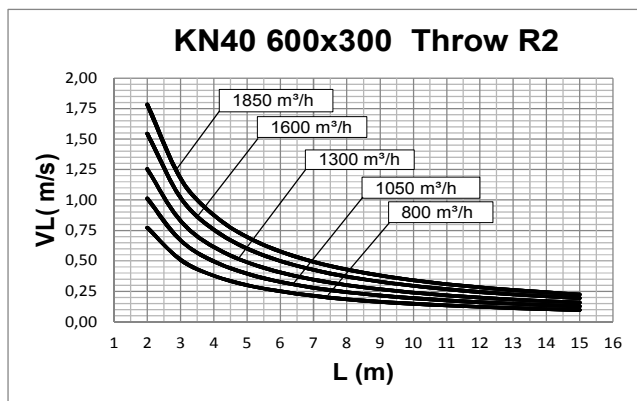
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 600x300



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

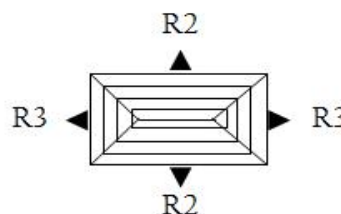
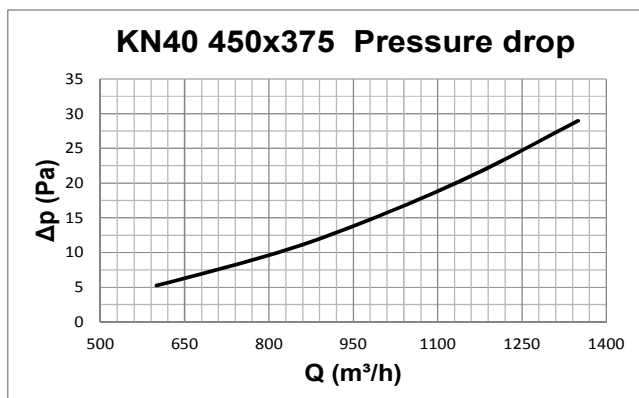
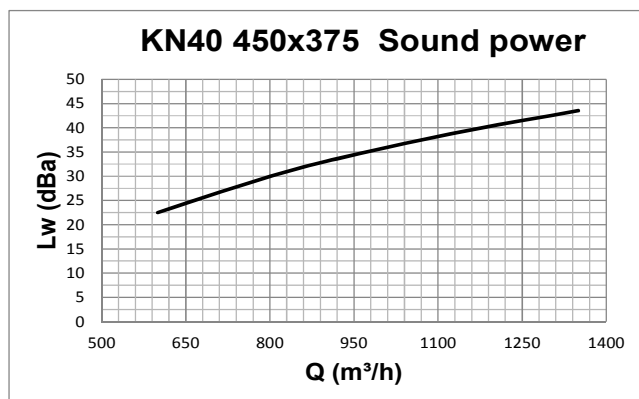
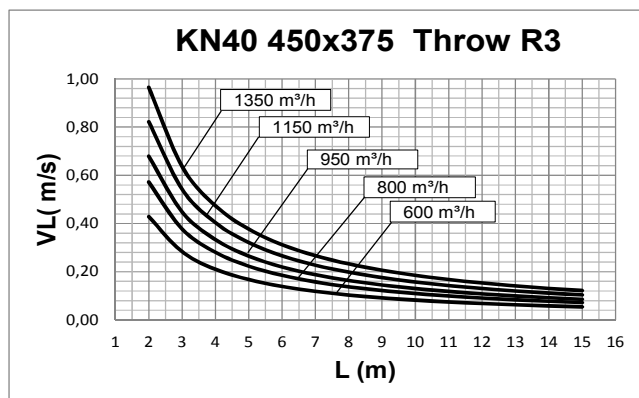
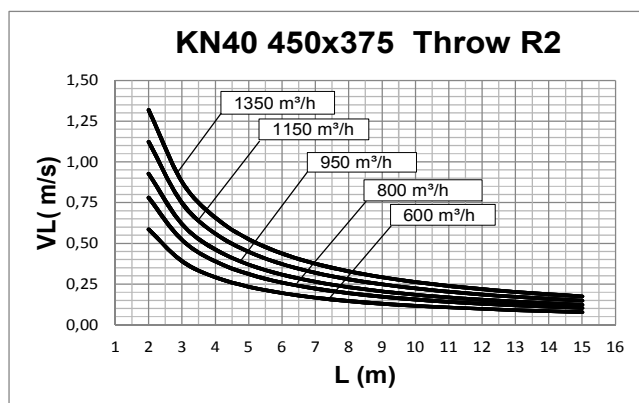
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 450x375



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

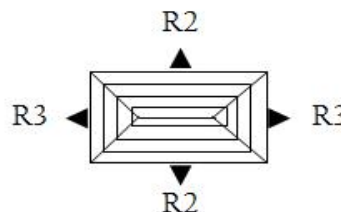
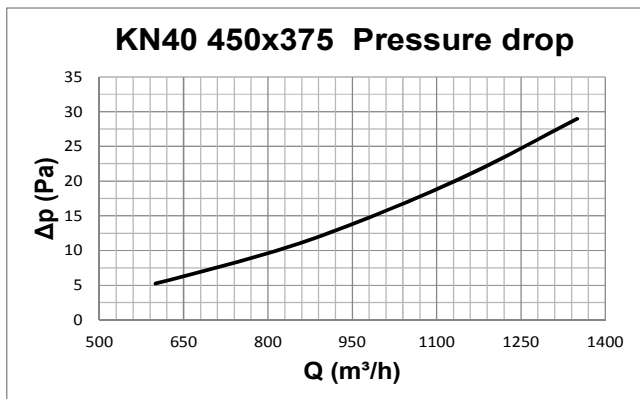
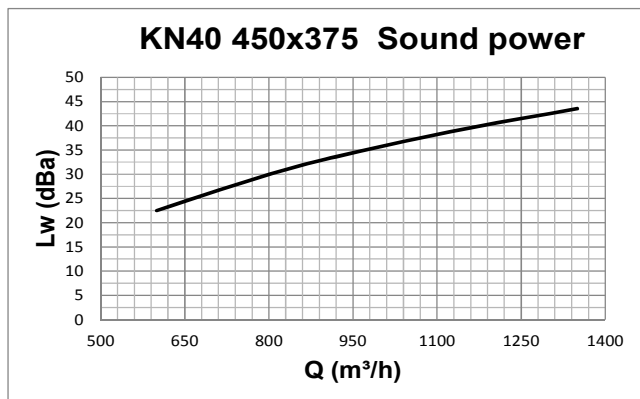
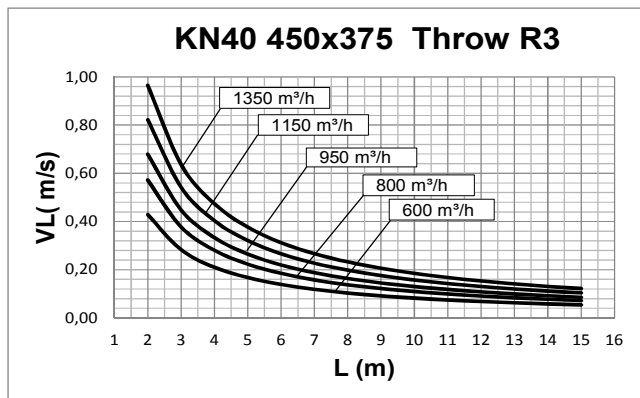
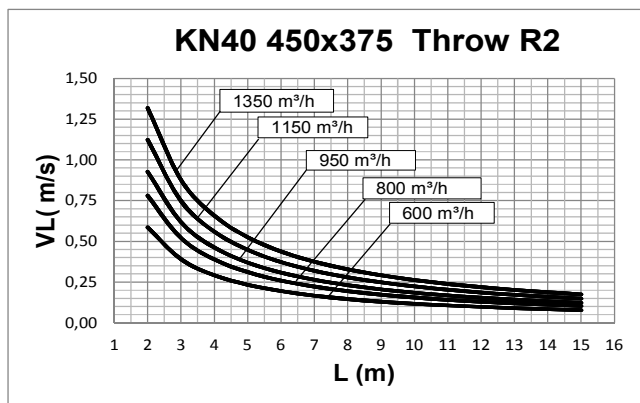
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 450x375



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBa and is determined by the room size, the shape of the environment and the interior features.

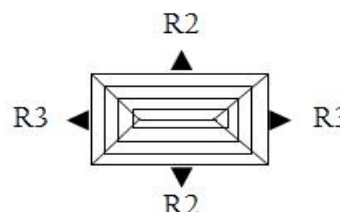
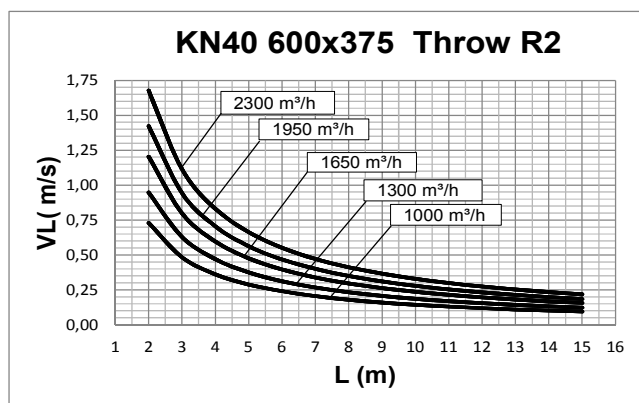




# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 600x375

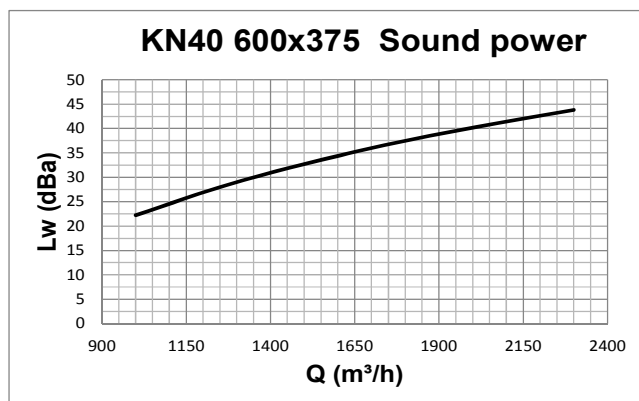
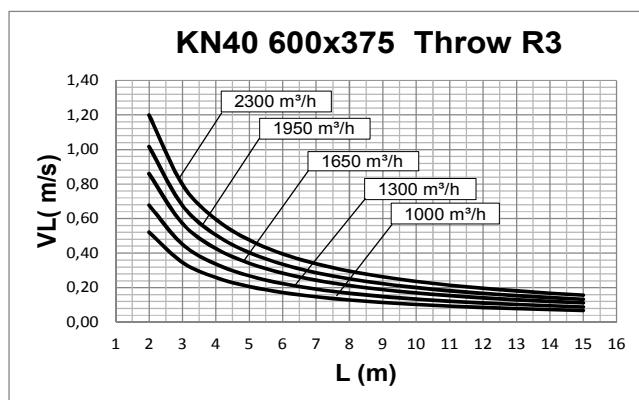


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

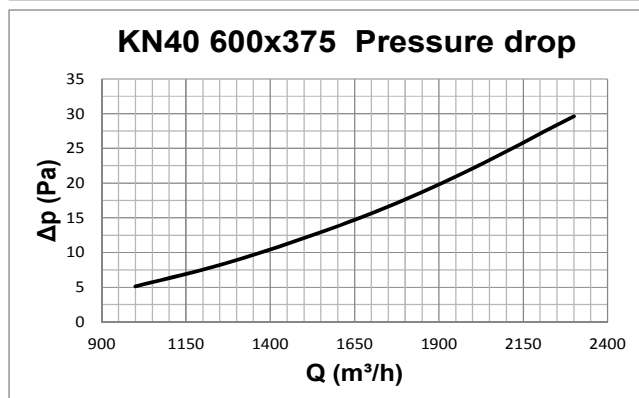


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

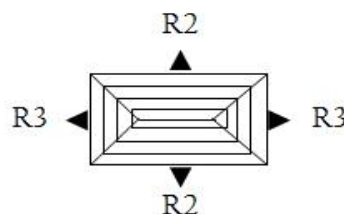
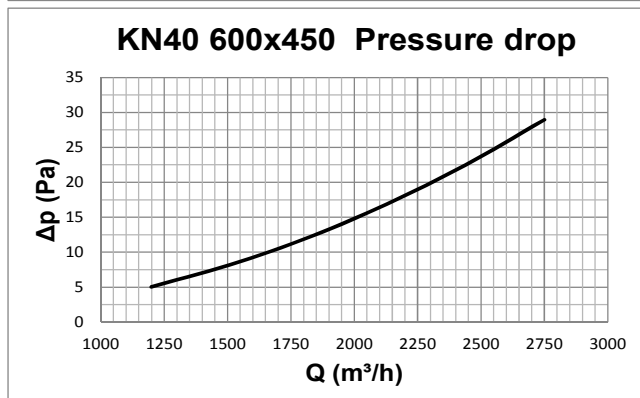
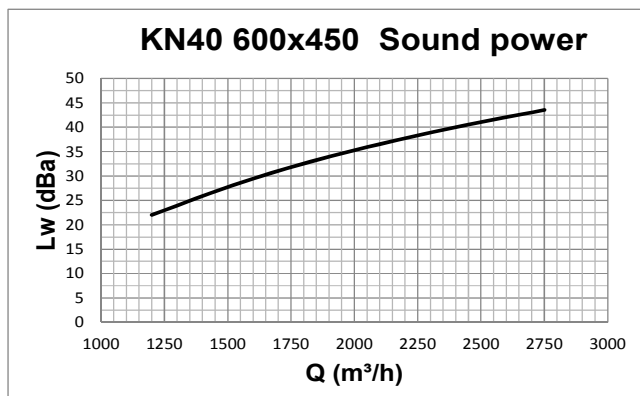
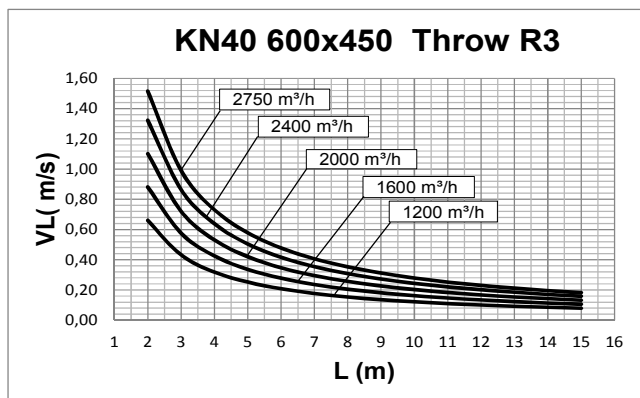
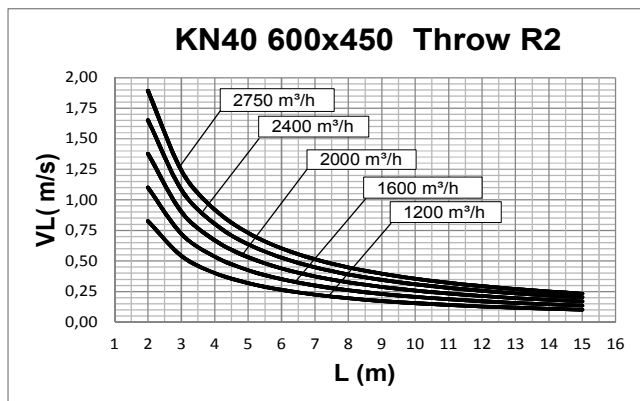




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 40  
SERIES

PERFORMANCE KN40 600x450



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

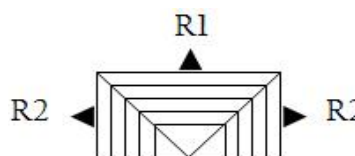
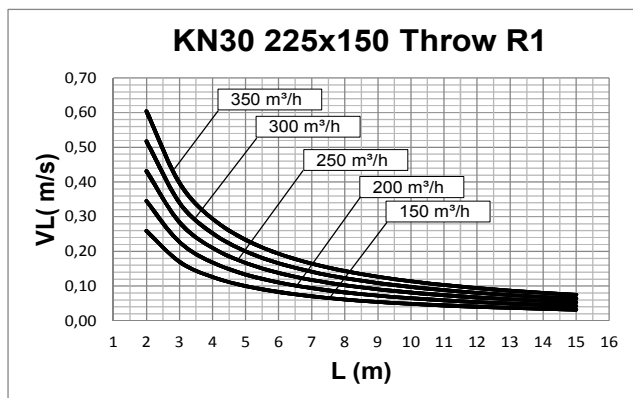
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 225x150

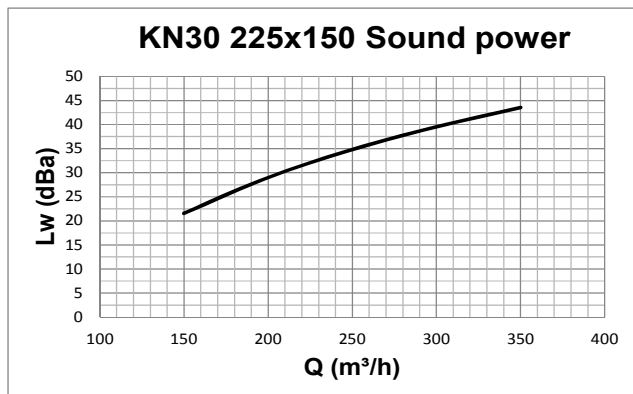
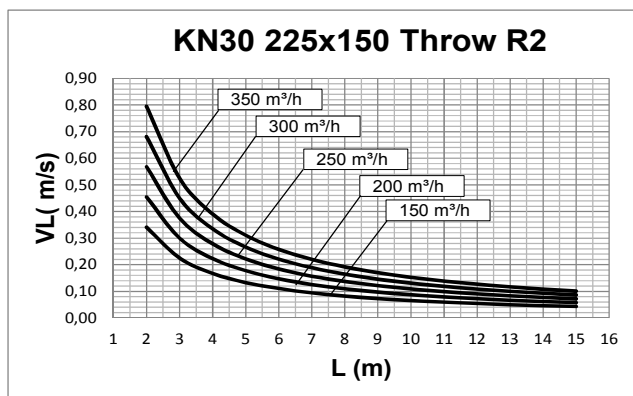


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

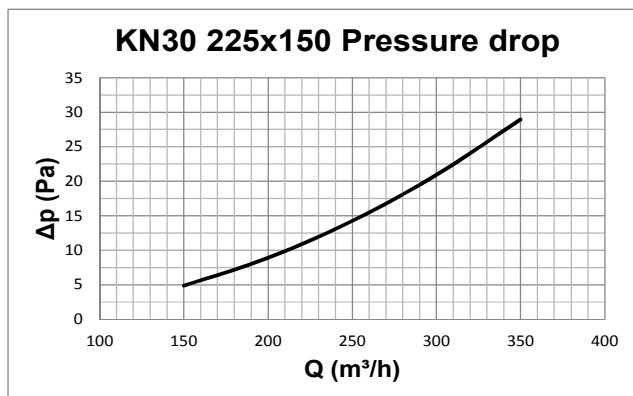


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

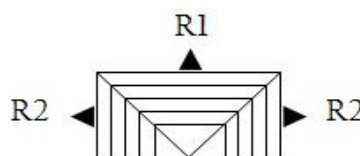
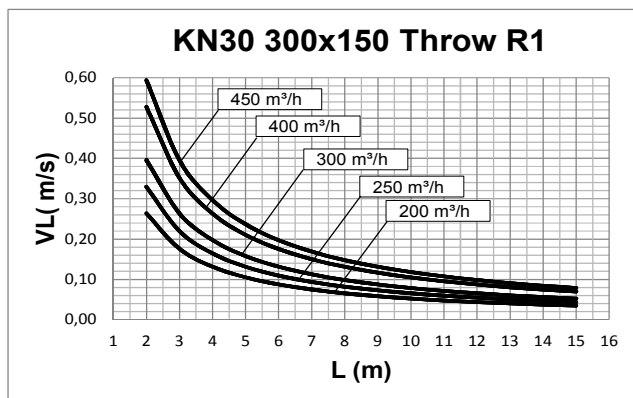




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 300x150

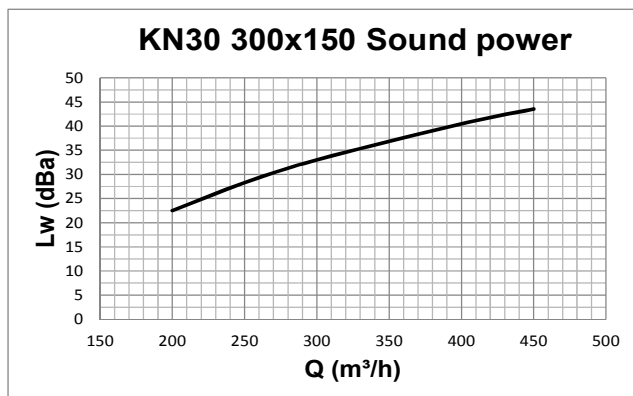
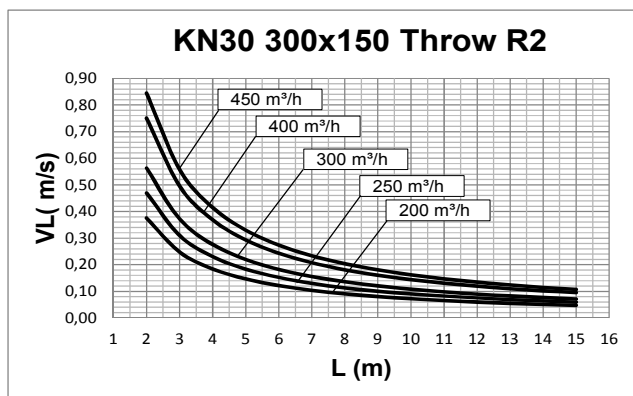


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

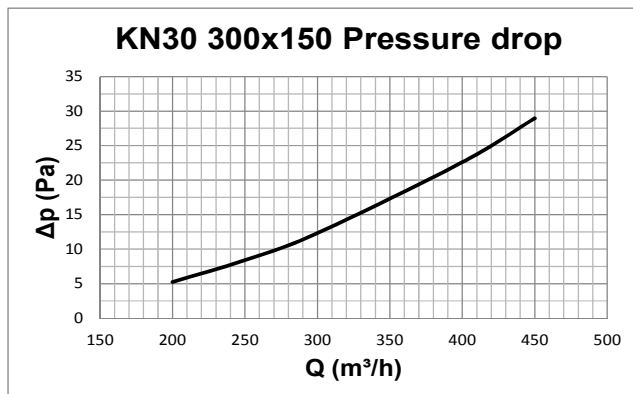


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

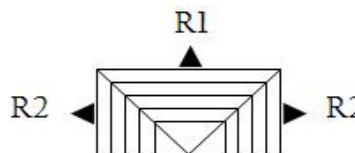
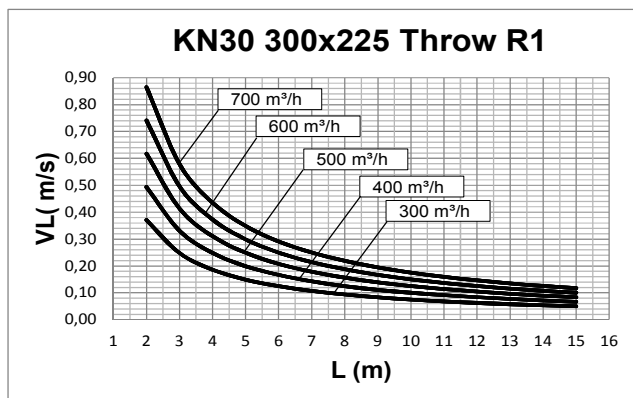




# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 300x225

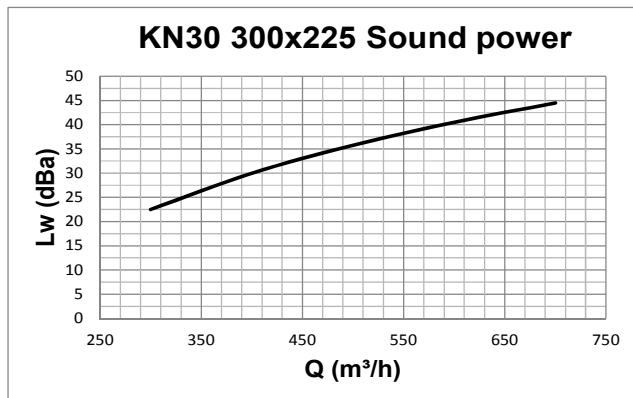
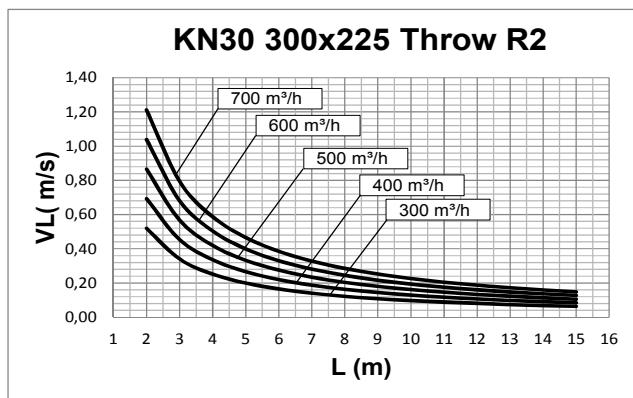


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

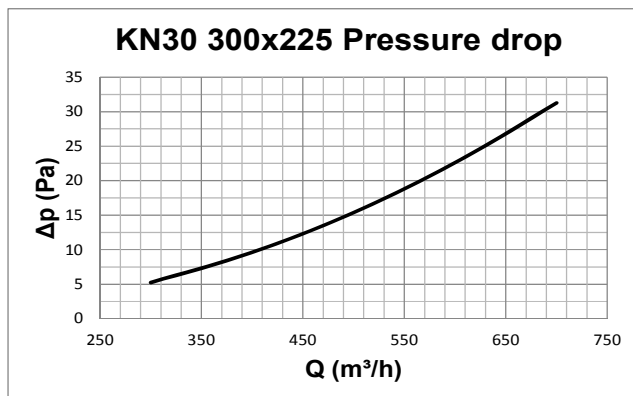


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

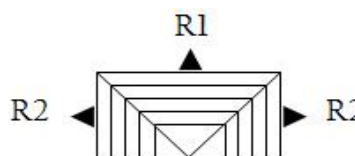
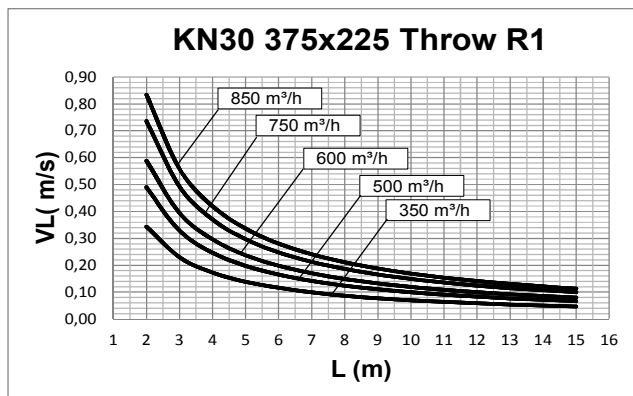




# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 375x225

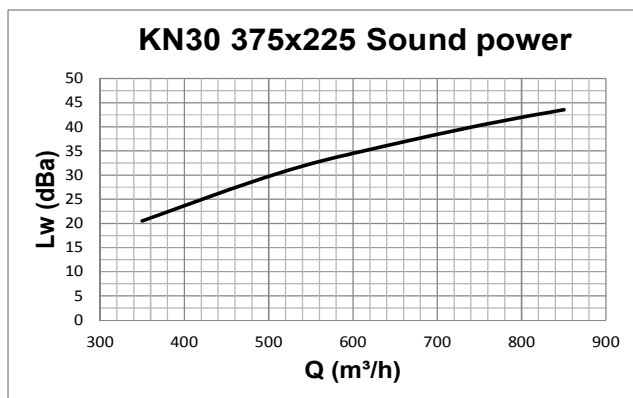
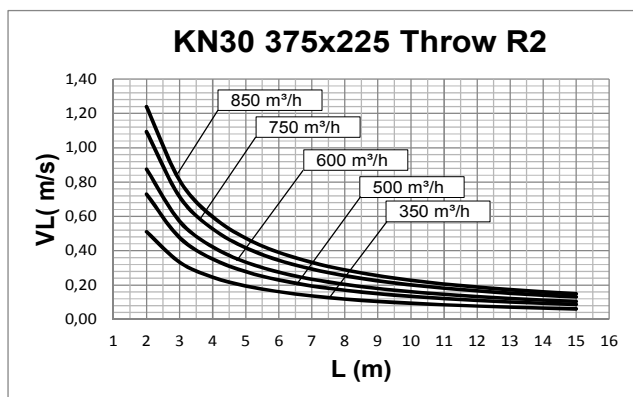


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

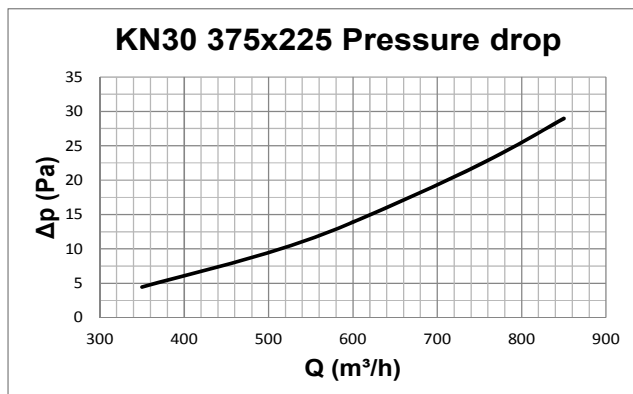


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

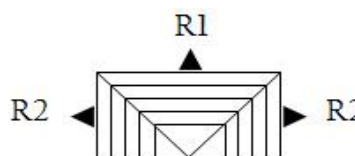
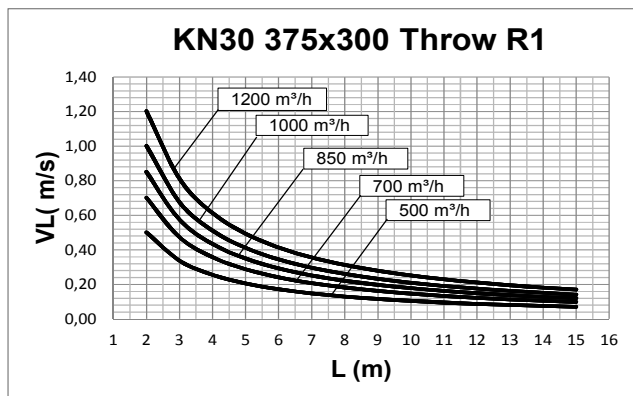




# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 375x300

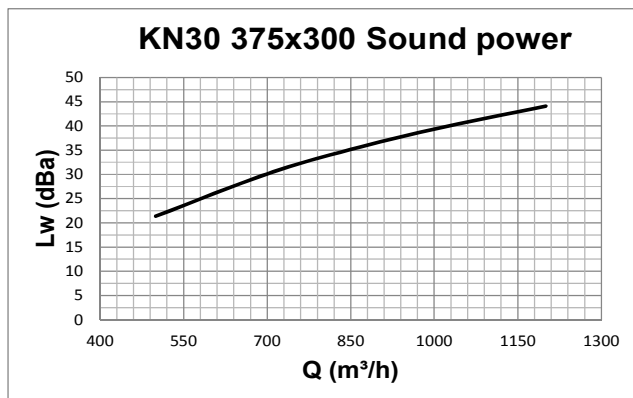
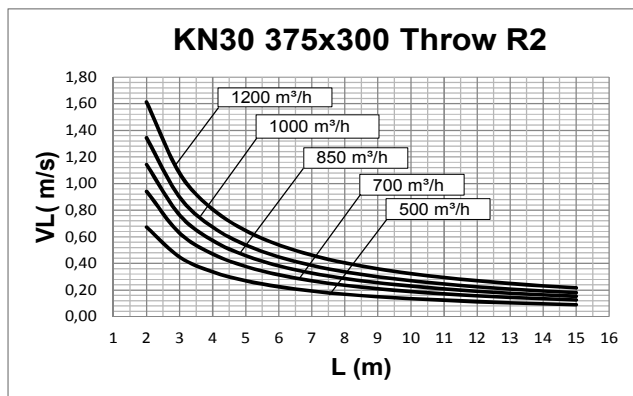


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

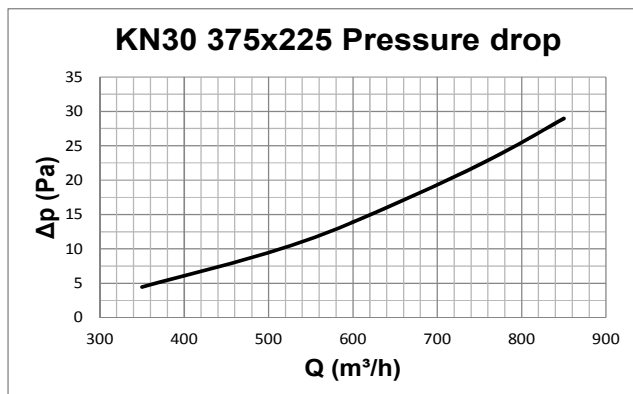


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

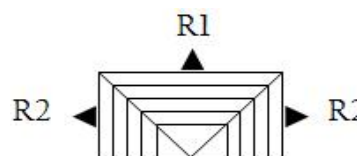
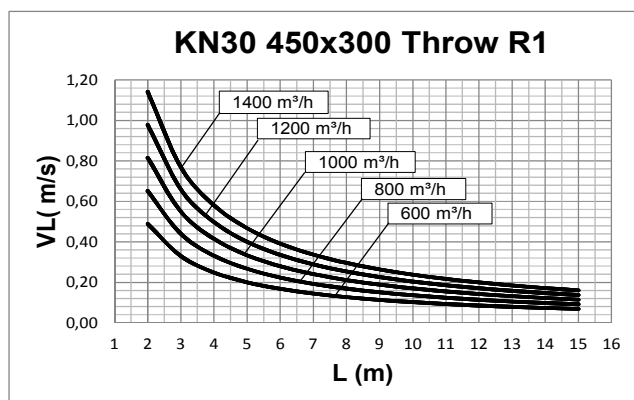




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 450x300

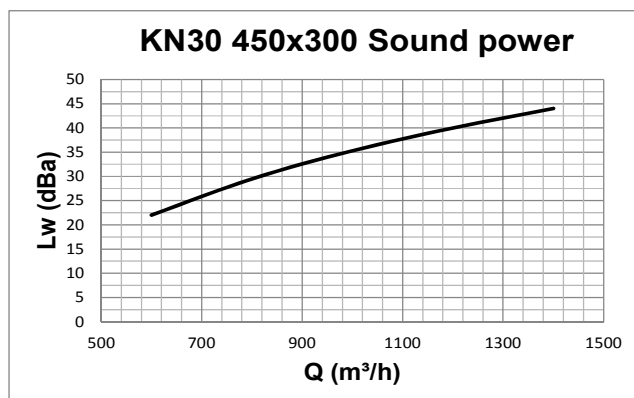
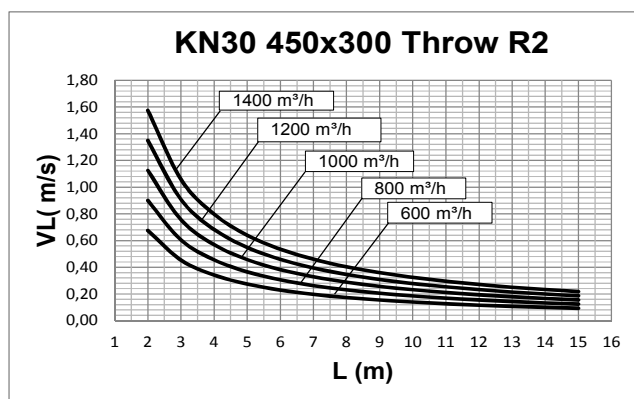


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

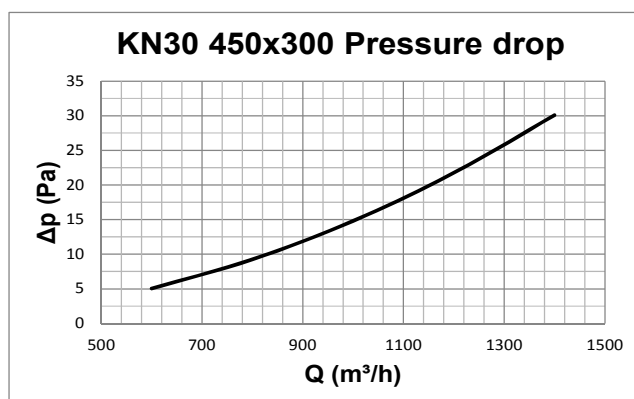


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



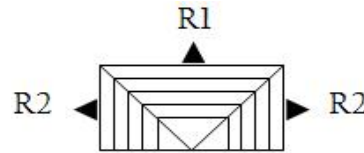
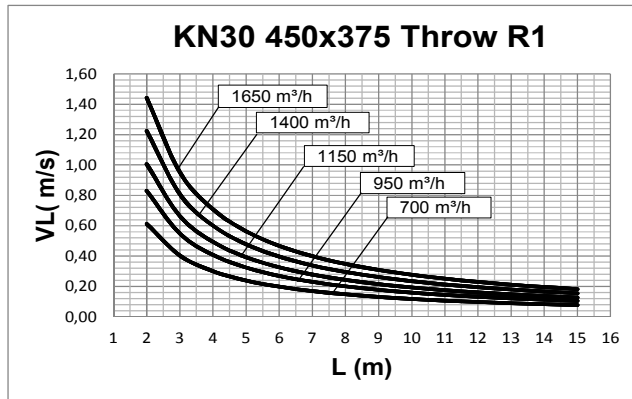




# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN 30  
SERIES

PERFORMANCE KN30 450x375

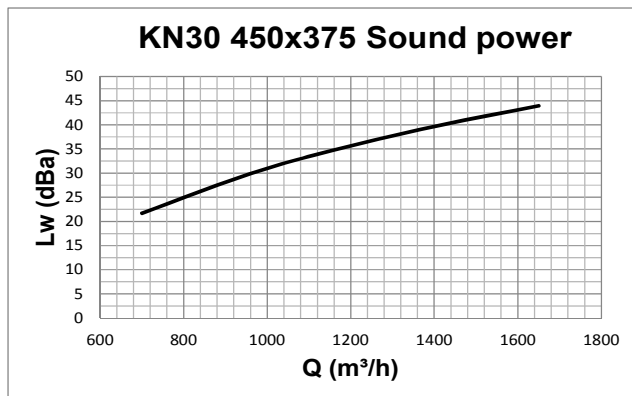
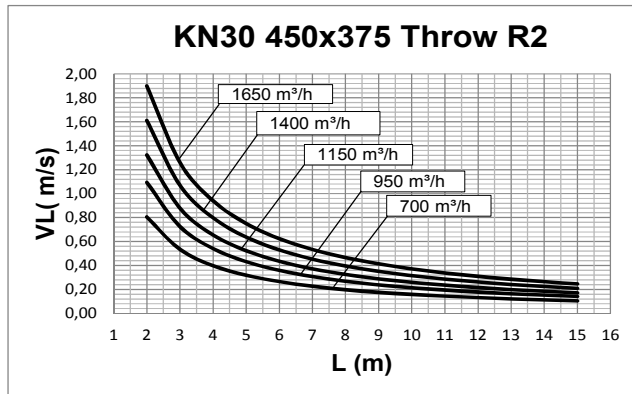


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

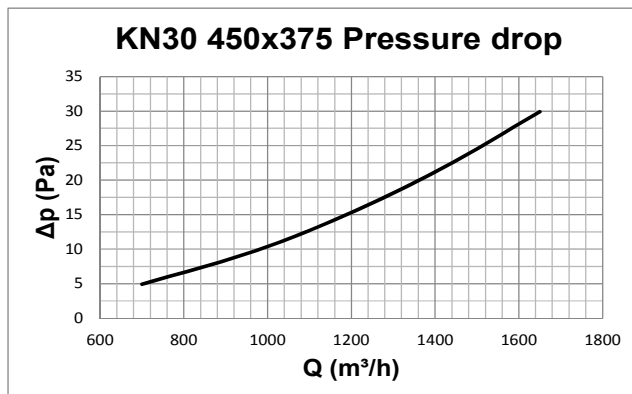


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

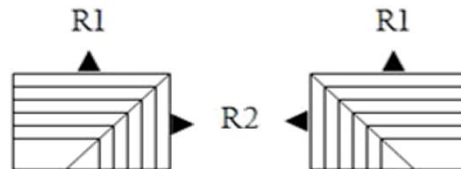
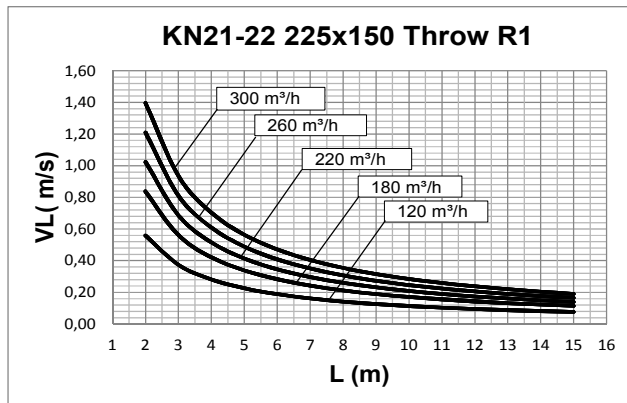




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 225x150

KN21  
KN22  
SERIES

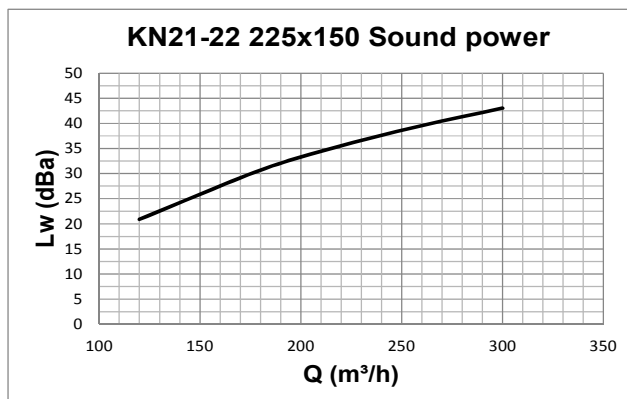
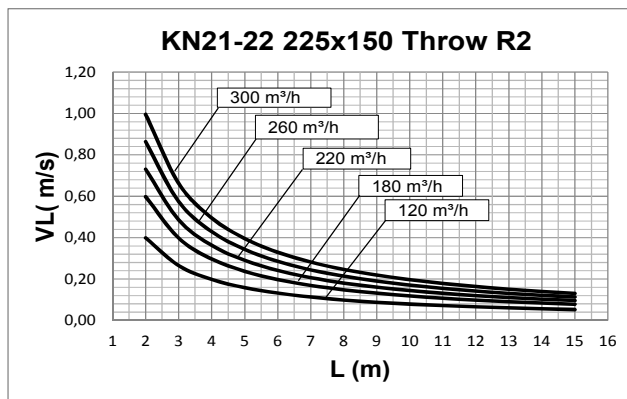


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

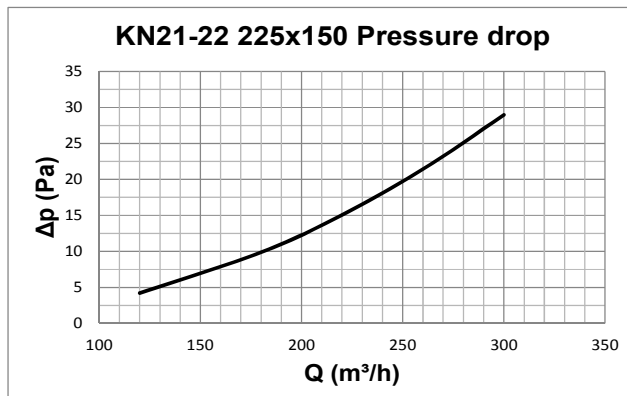


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

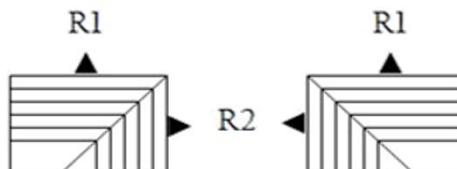
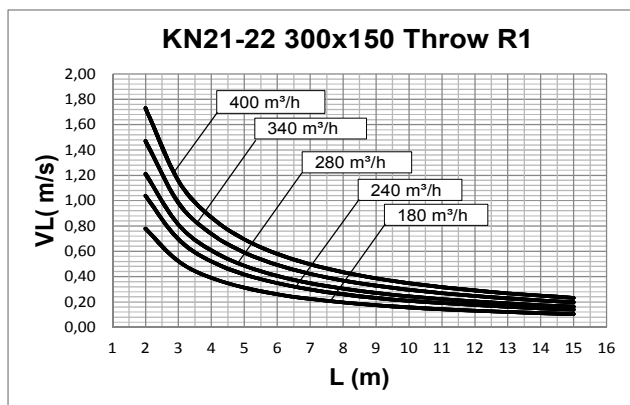




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 300x150

KN21  
KN22  
SERIES



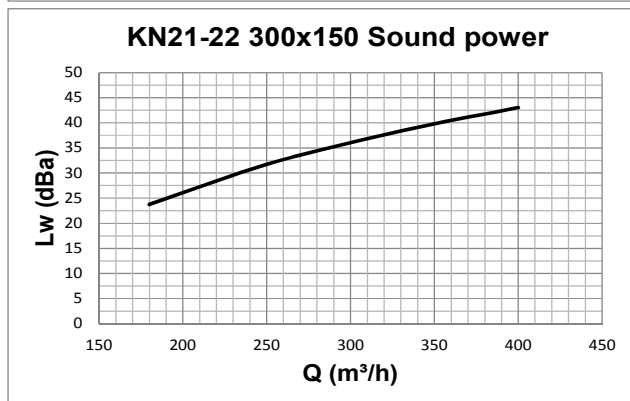
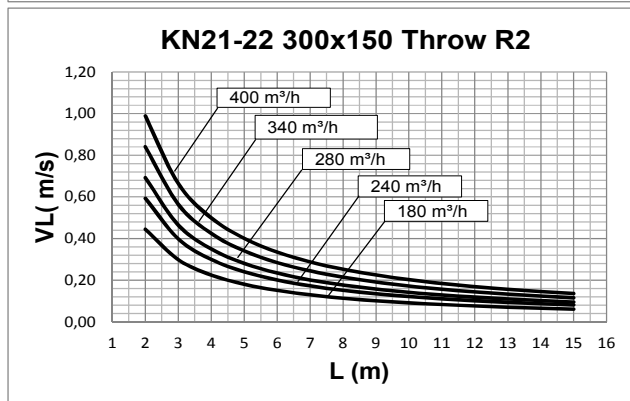
Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

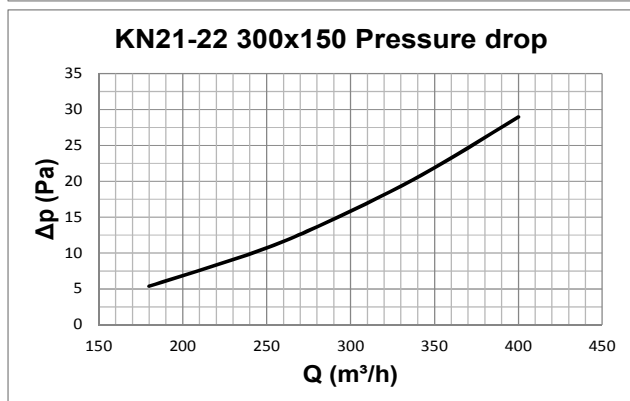


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBa and is determined by the room size, the shape of the environment and the interior features.

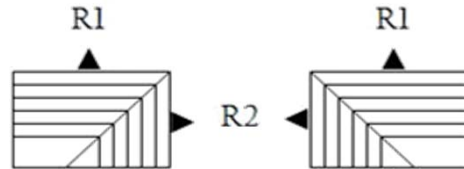
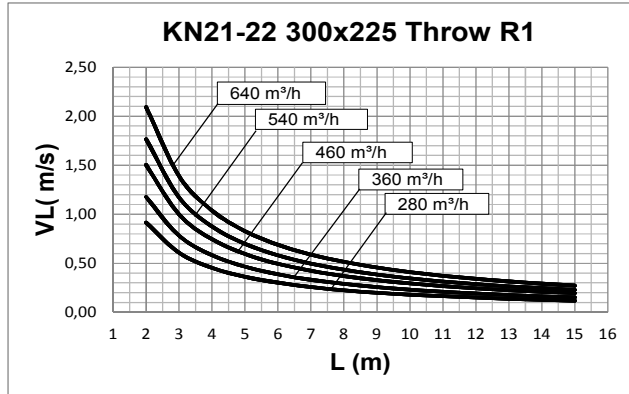




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 300x225

KN21  
KN22  
SERIES

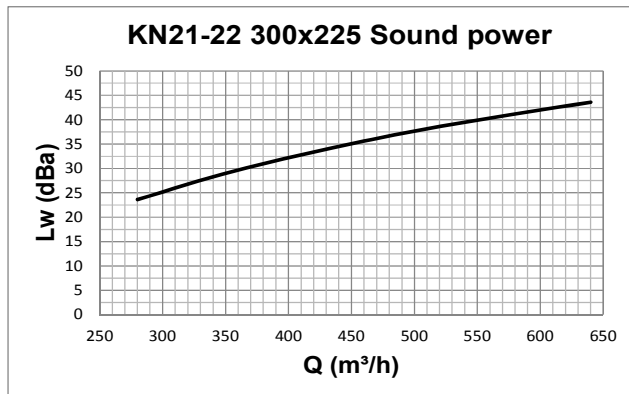
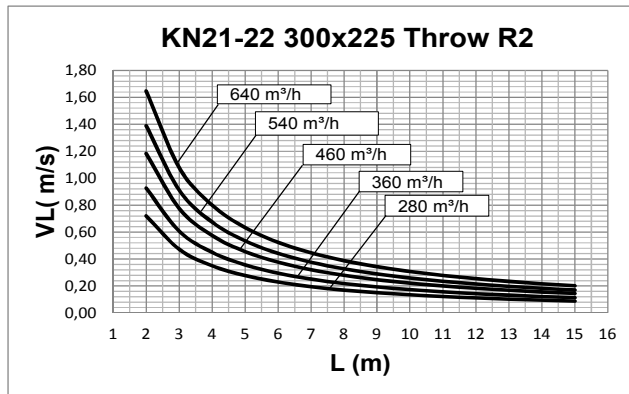


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

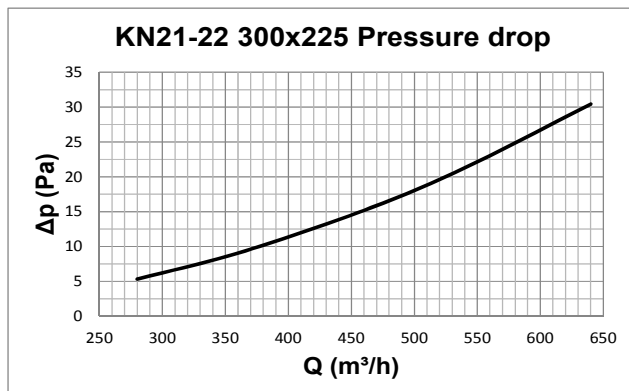


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

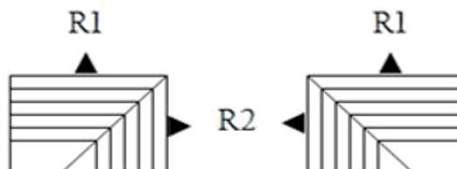
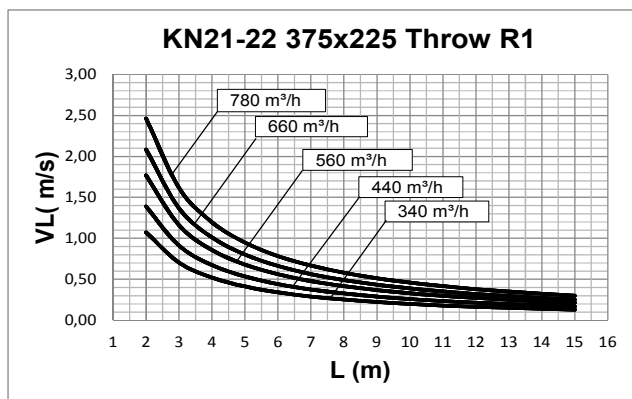




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 375x225

KN21  
KN22  
SERIES



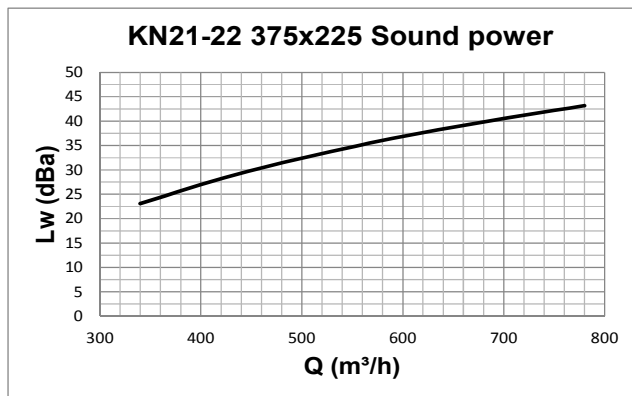
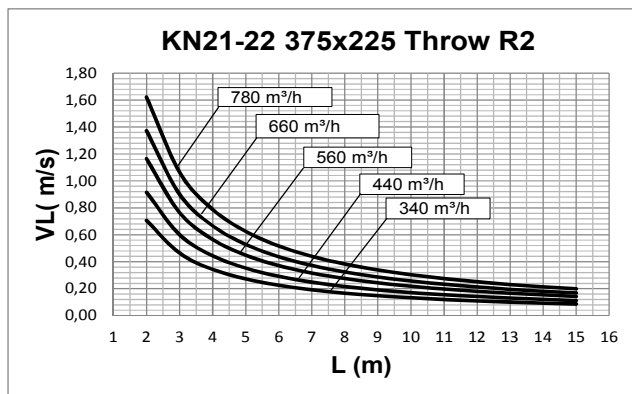
Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion -*

*Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

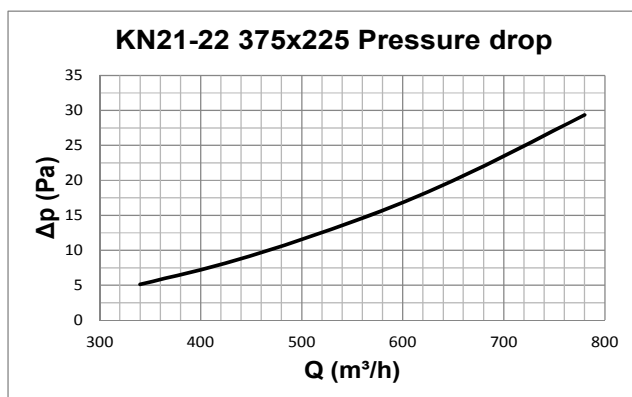


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

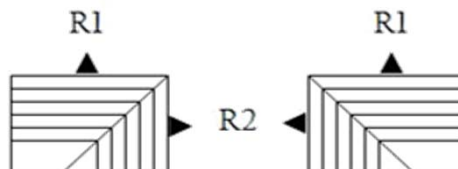
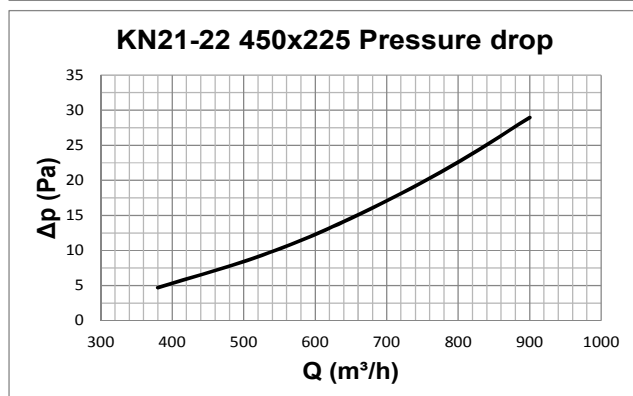
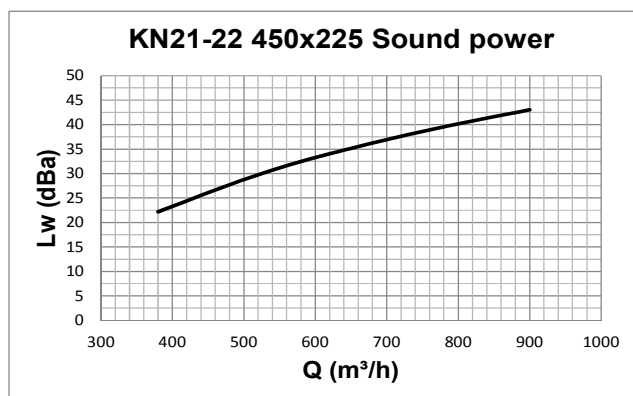
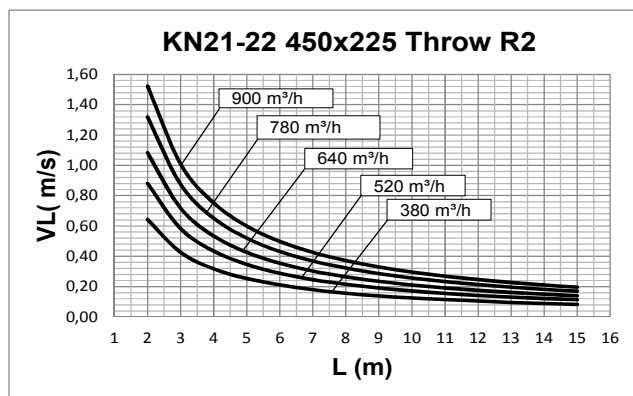
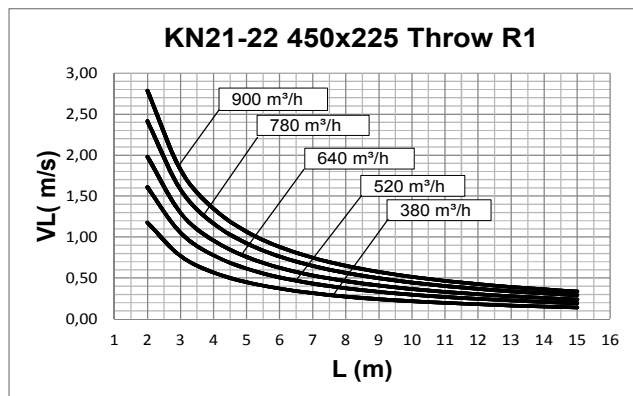




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 450x225

KN21  
KN22  
SERIES



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

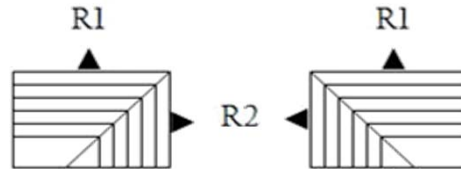
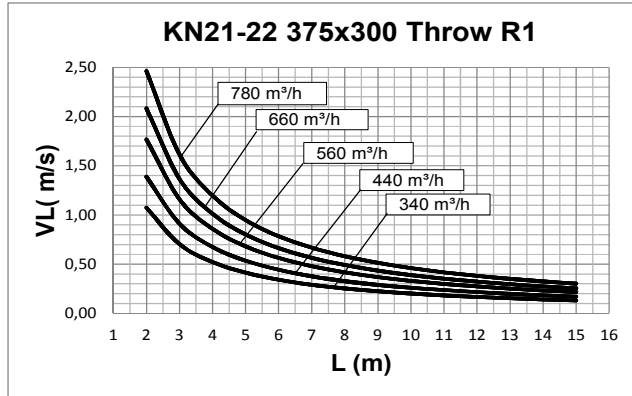
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 375x300

KN21  
KN22  
SERIES

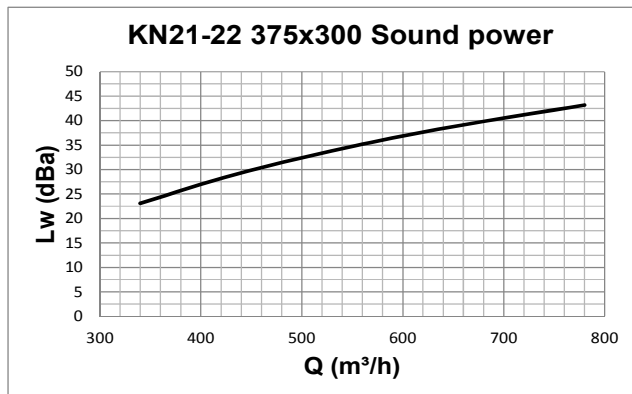
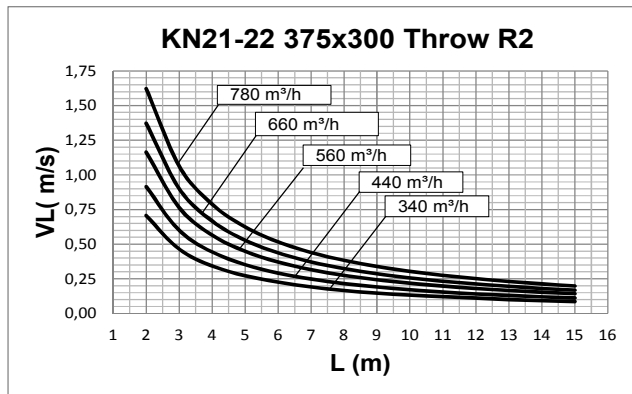


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

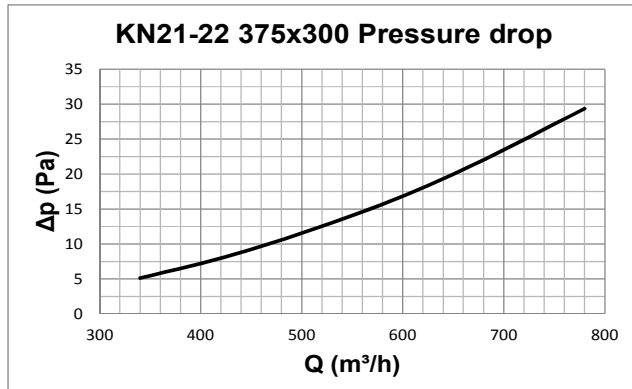


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

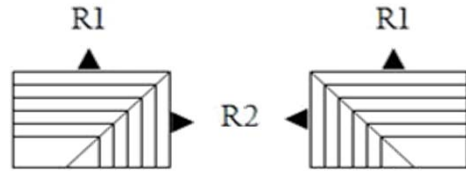
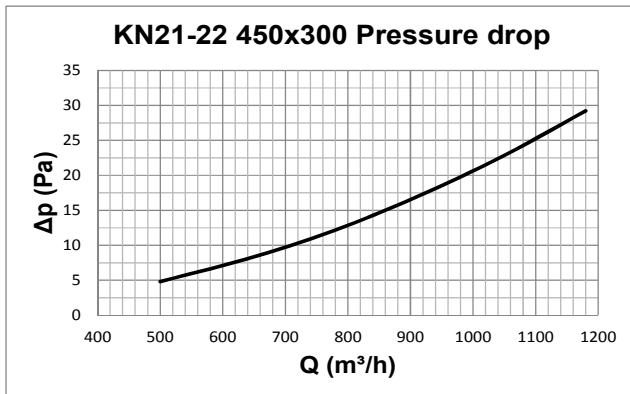
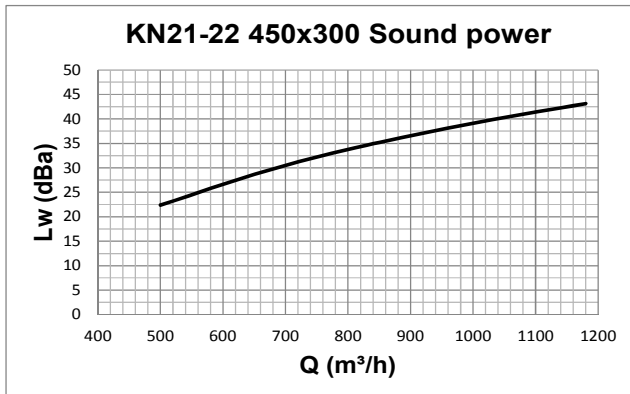
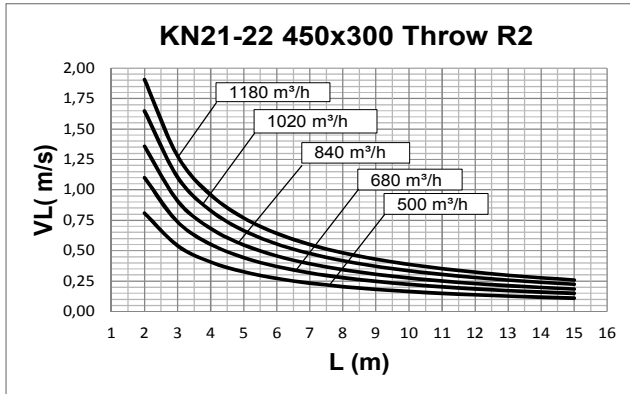
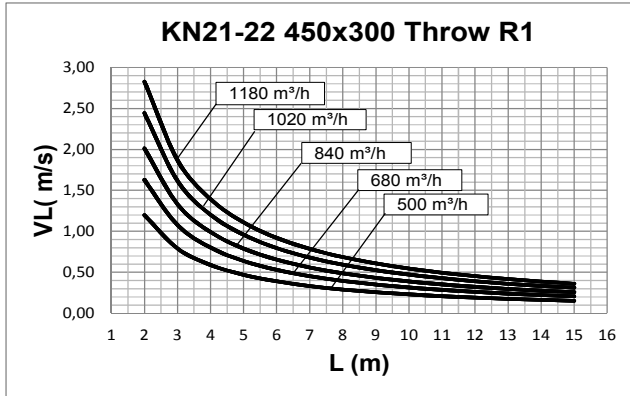




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN21 - KN22 450x300

KN21  
KN22  
SERIES



Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

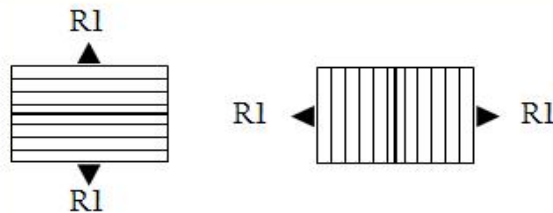
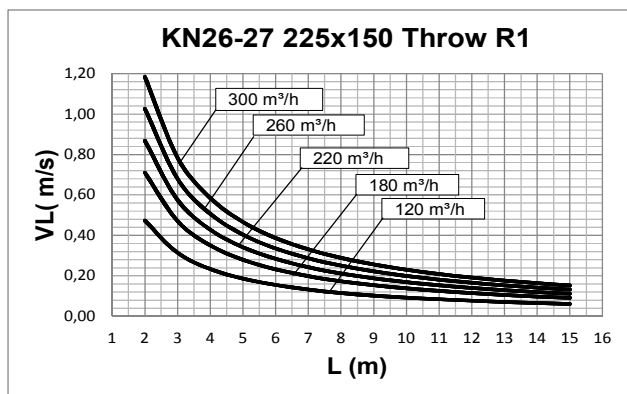




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 225x150

KN26  
KN27  
SERIES

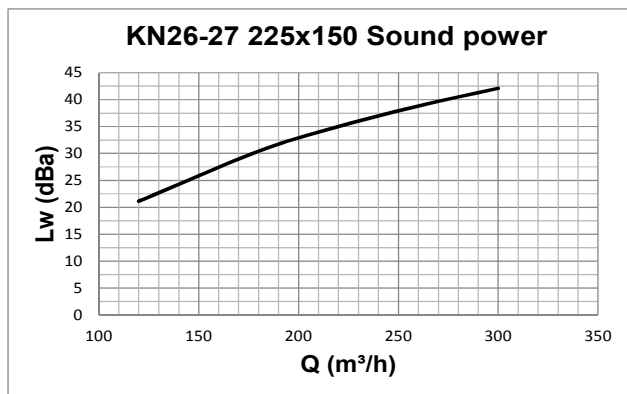


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

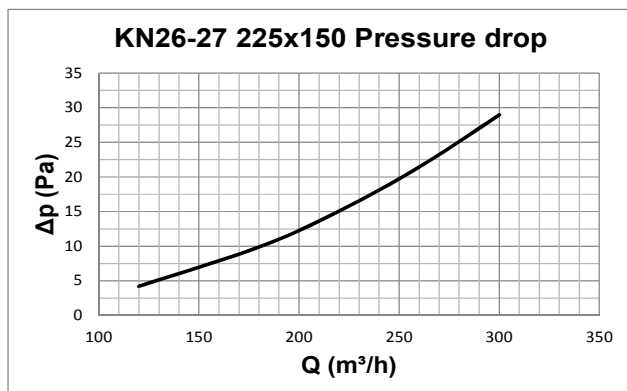


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

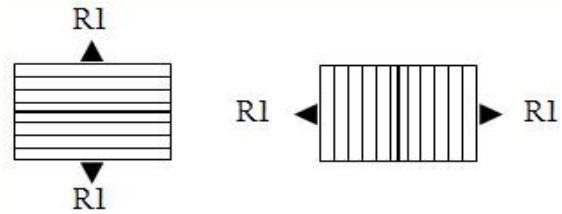
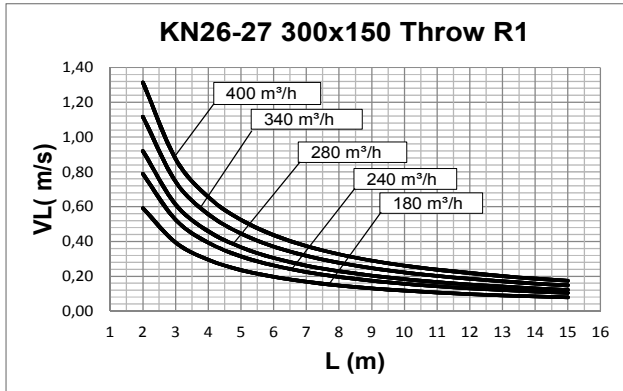




MULTIDIRECTIONAL DIFFUSERS  
FIXED RECTANGULAR GEOMETRY

KN26  
KN27  
SERIES

PERFORMANCE KN26 - KN27 300x150

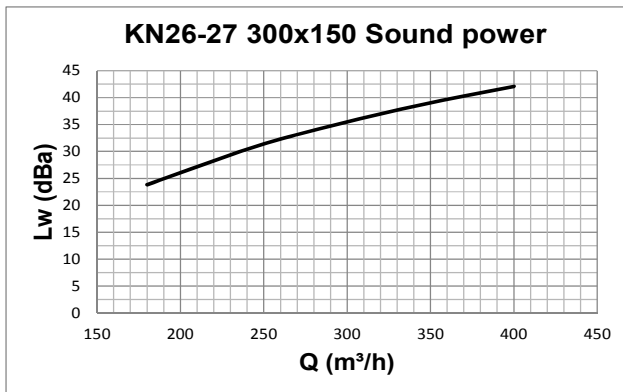


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

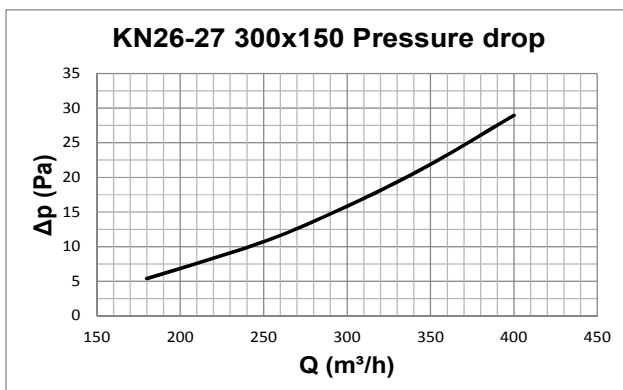


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

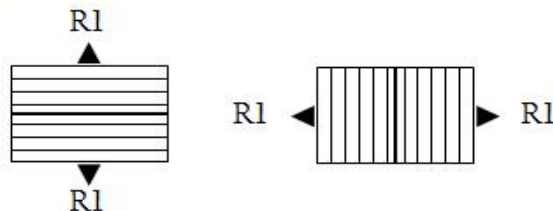
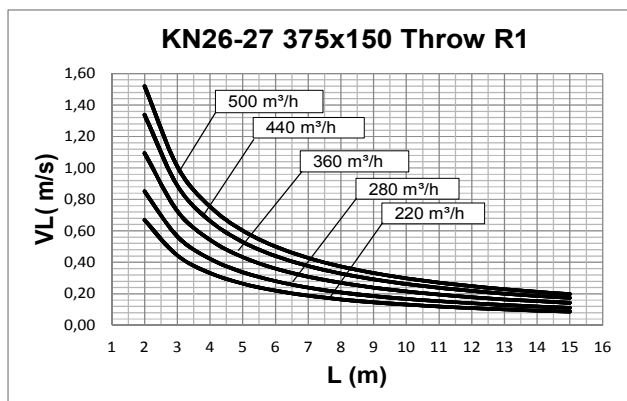




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 375x150

KN26  
KN27  
SERIES

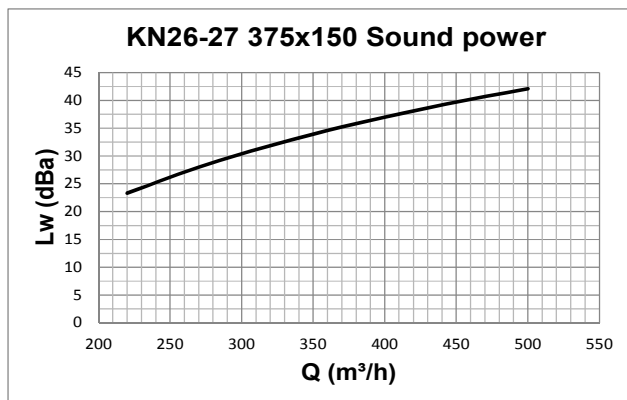


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

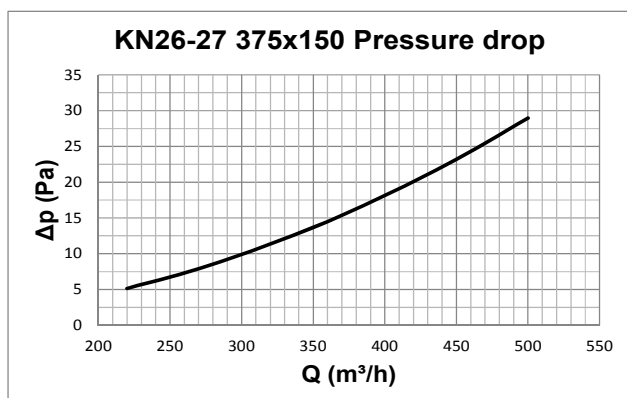


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

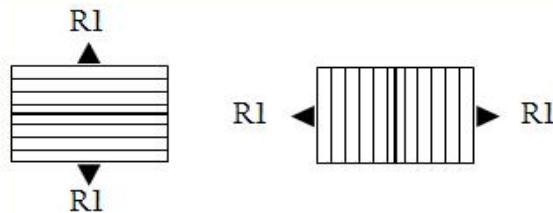
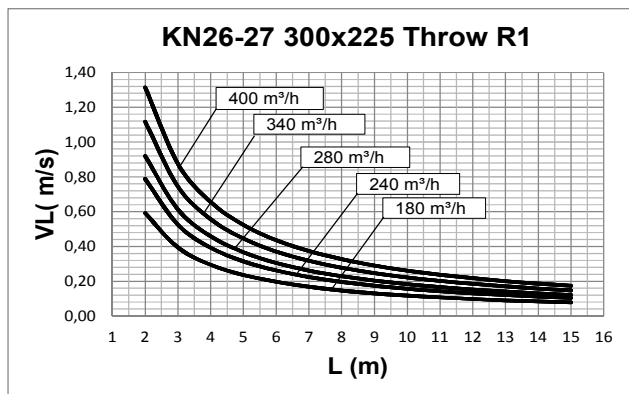




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 300x225

KN26  
KN27  
SERIES

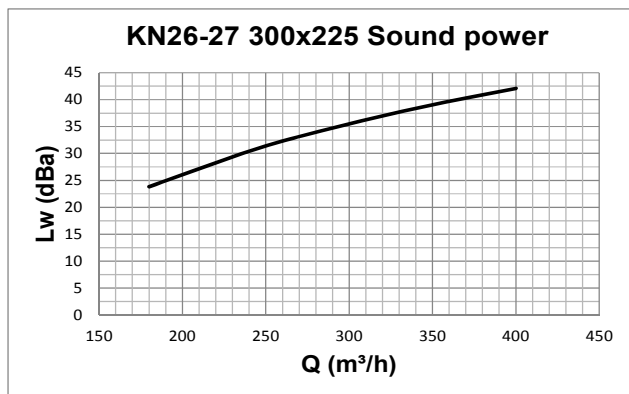


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

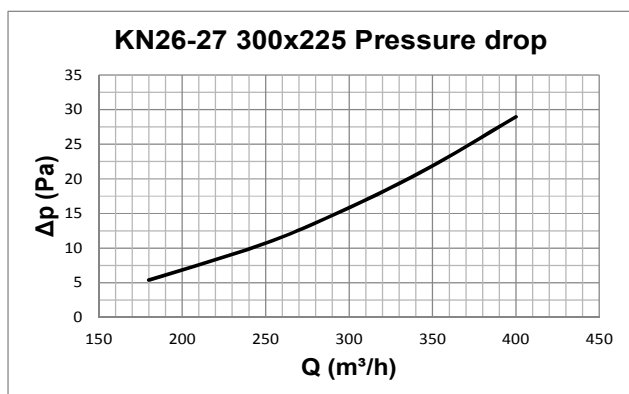


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

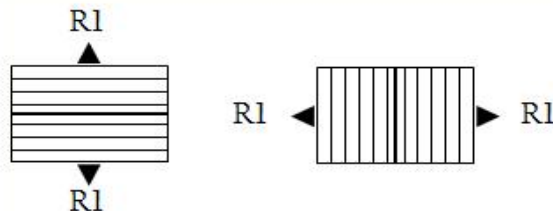
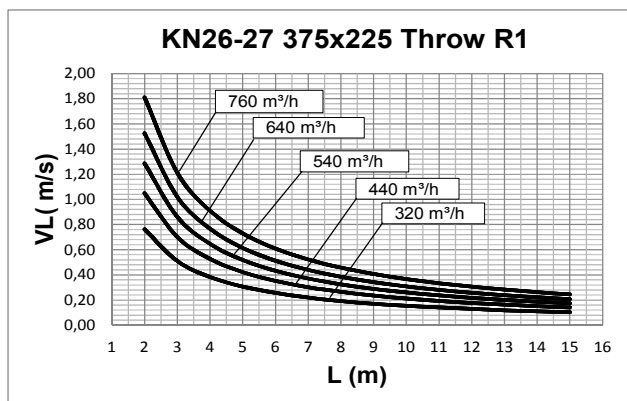




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 375x225

KN26  
KN27  
SERIES

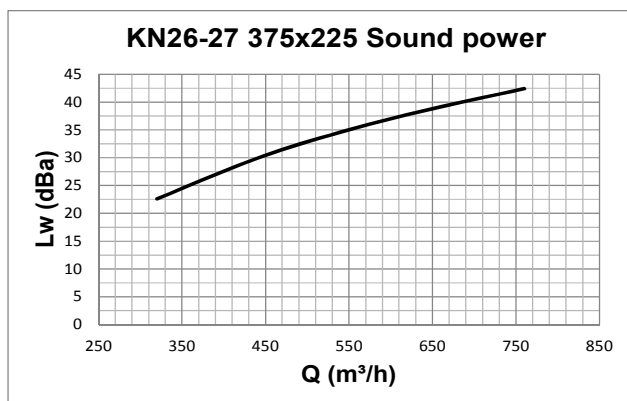


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

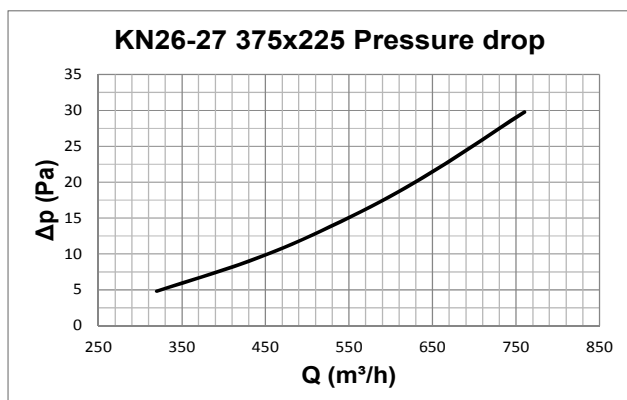


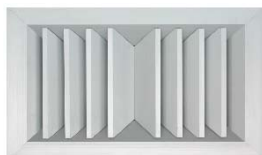
Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBa and is determined by the room size, the shape of the environment and the interior features.

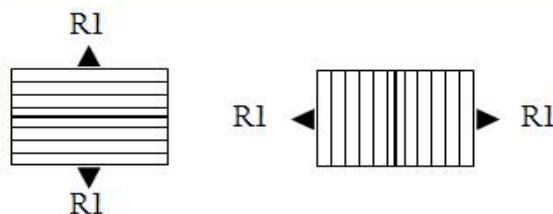
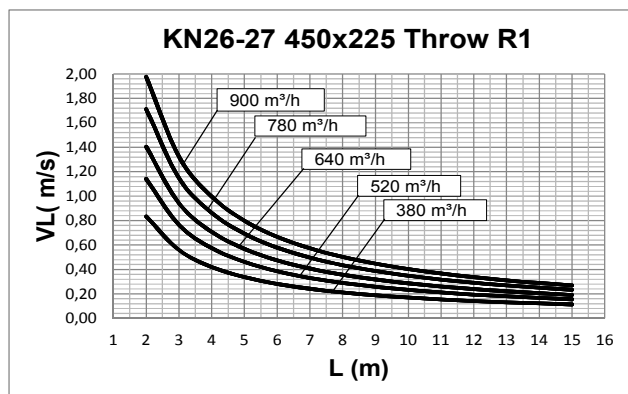




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 450x225

KN26  
KN27  
SERIES

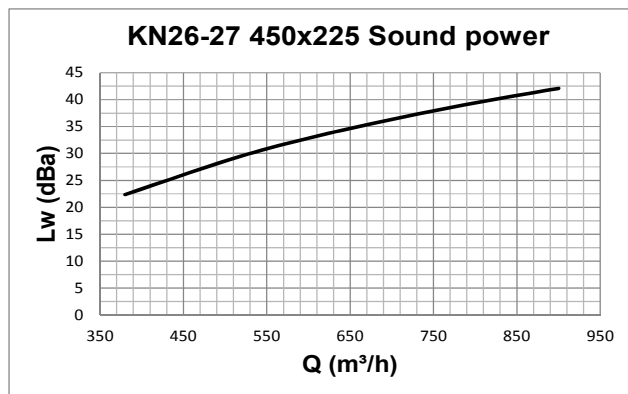


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

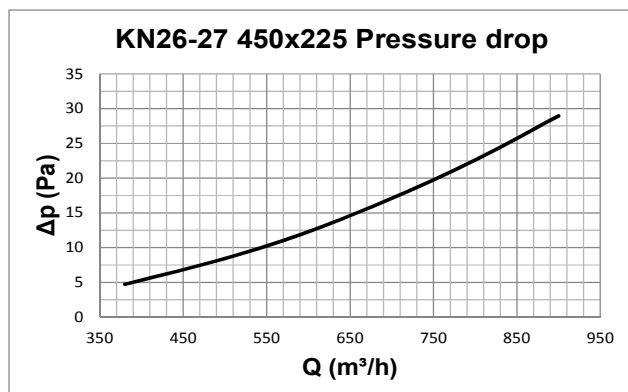


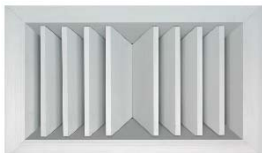
Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

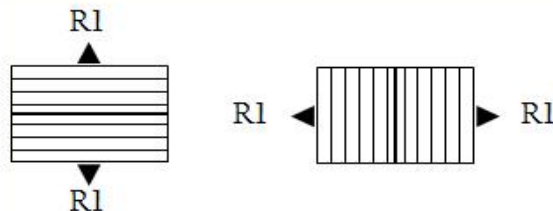
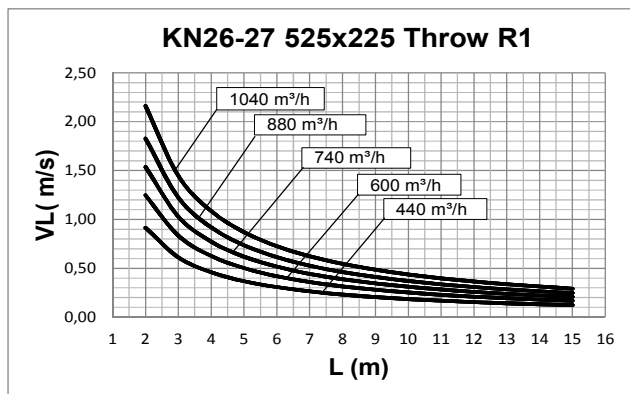




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 525x225

KN26  
KN27  
SERIES

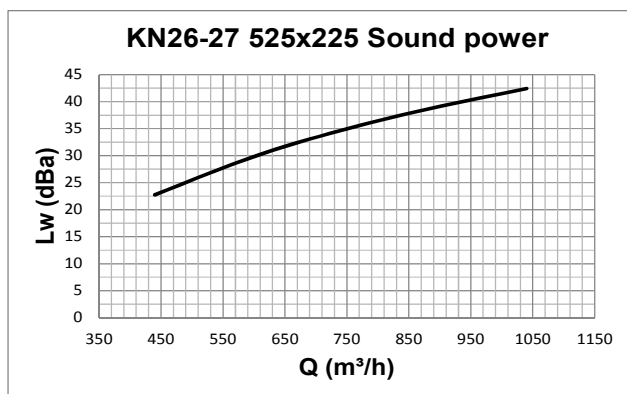


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

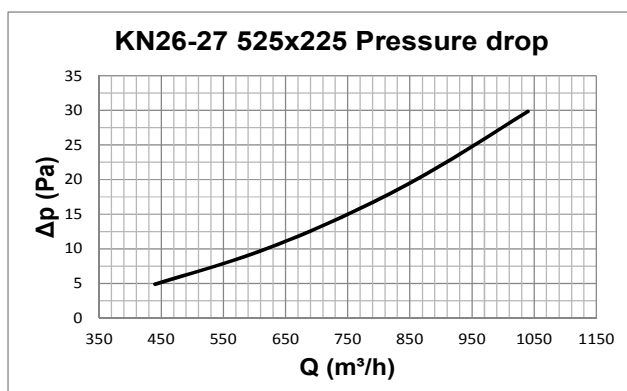


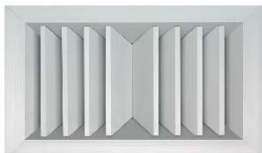
Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

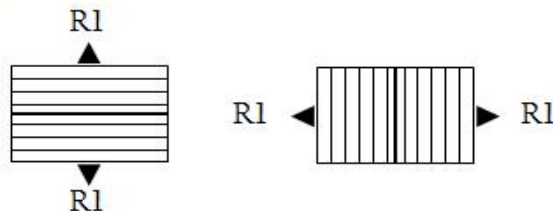
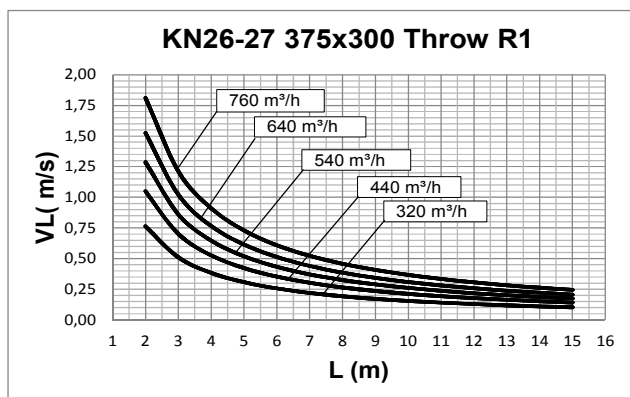




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 375x300

KN26  
KN27  
SERIES

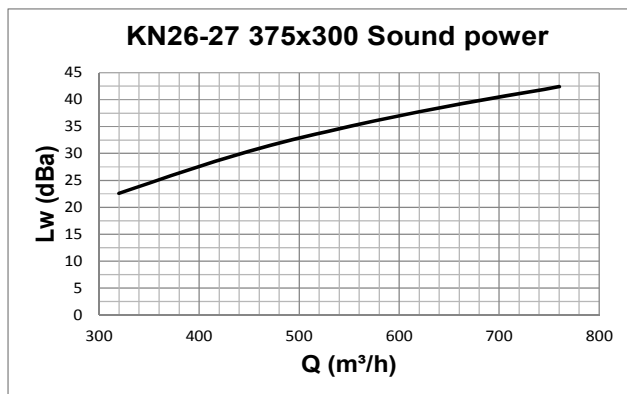


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

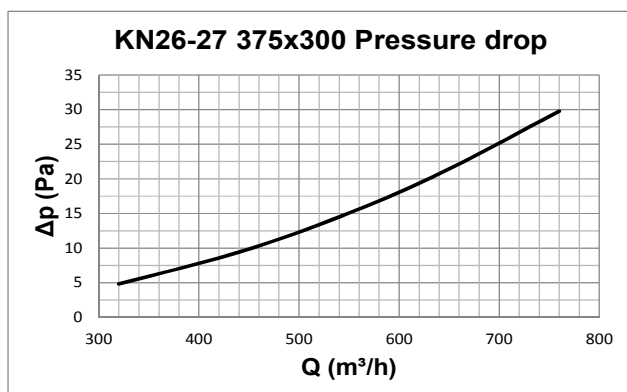


Data measured in reverberation room in accordance with international standards:

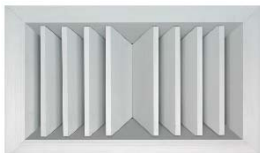
ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



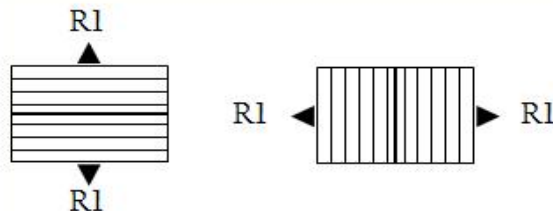
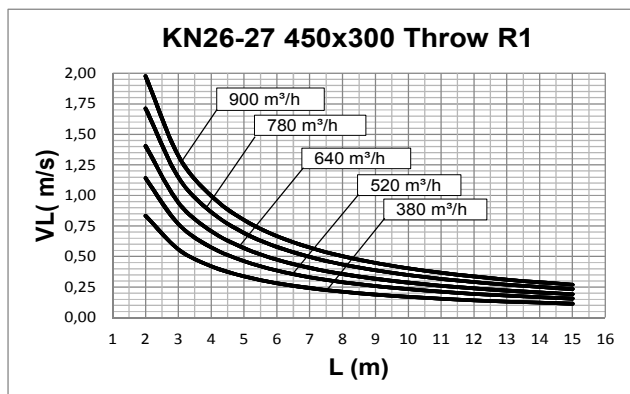




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN26 - KN27 450x300

KN26  
KN27  
SERIES

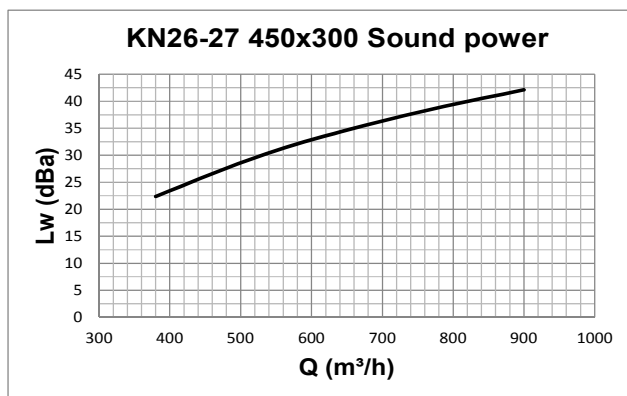


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

$L$  (m) horizontal distance in metres from the centre of the diffuser

$VL$  (m/s) maximum speed in the air stream

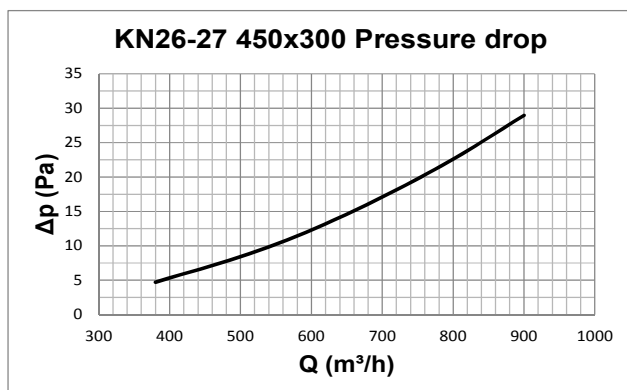


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

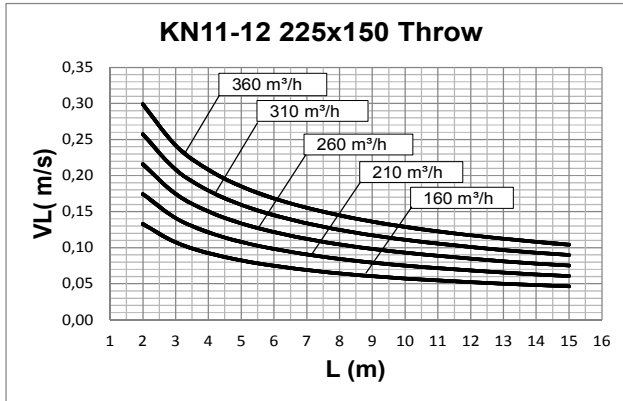




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN11  
KN12  
SERIES

PERFORMANCE KN11 - KN12 225x150

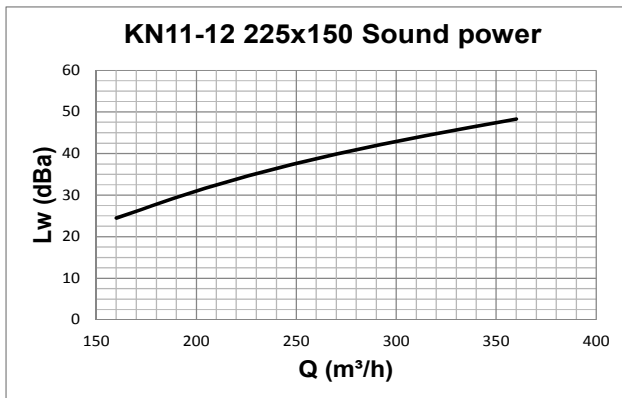


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

$L$  (m) horizontal distance in metres from the centre of the diffuser

$VL$  (m/s) maximum speed in the air stream

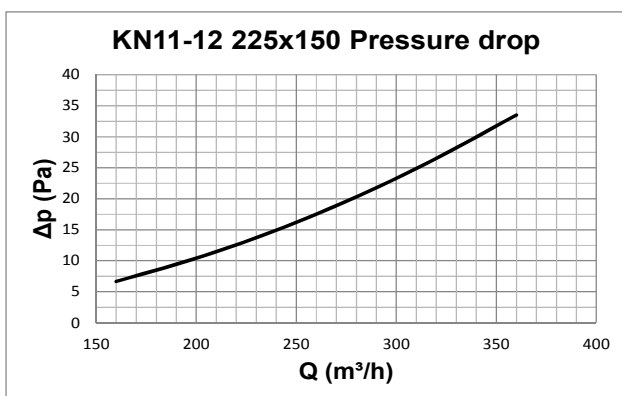


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

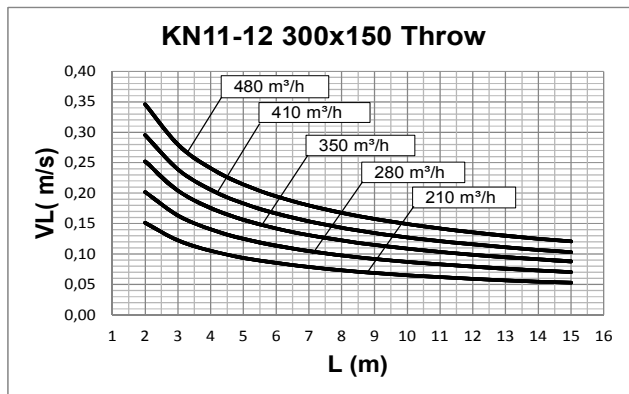




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN11  
KN12  
SERIES

PERFORMANCE KN11 - KN12 300x150

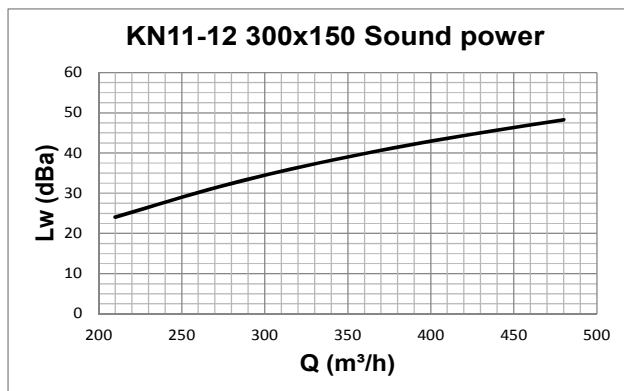


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

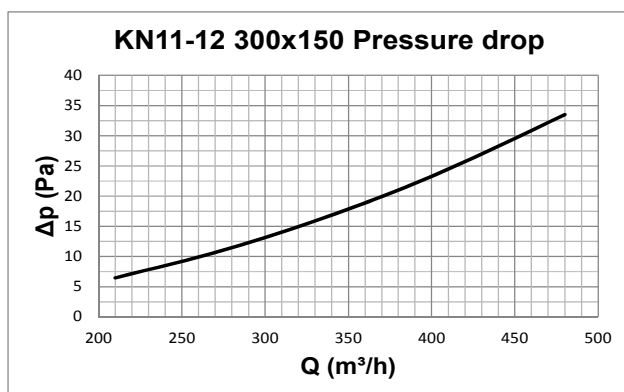


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

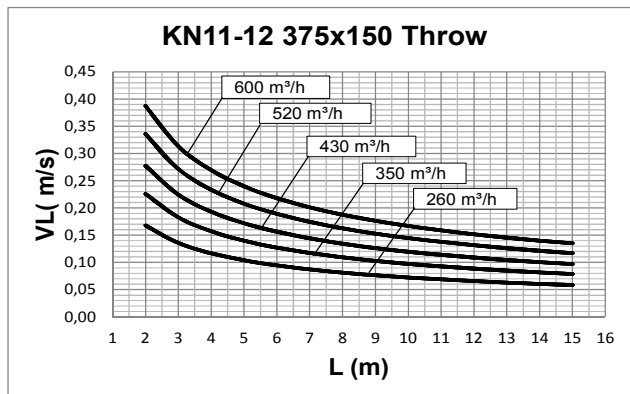




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 375x150

KN11  
KN12  
SERIES

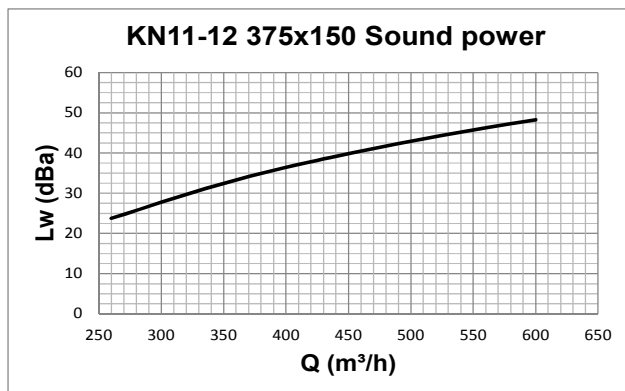


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

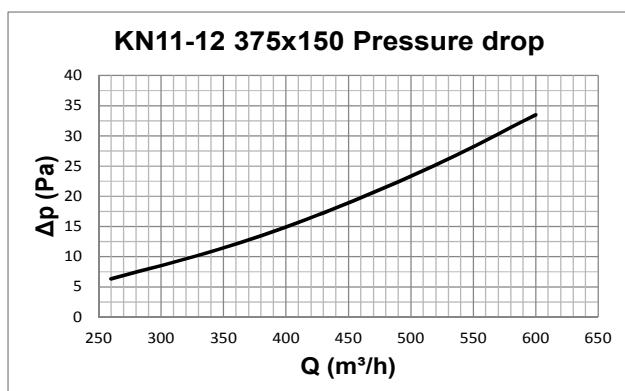


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

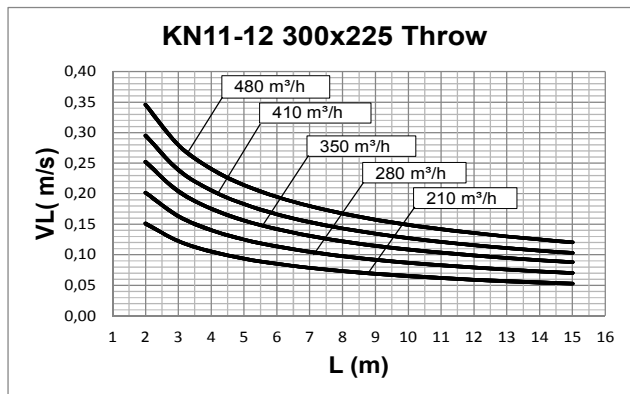




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 300x225

KN11  
KN12  
SERIES

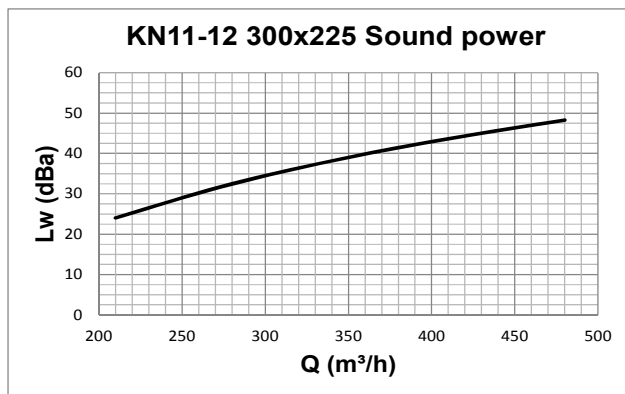


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

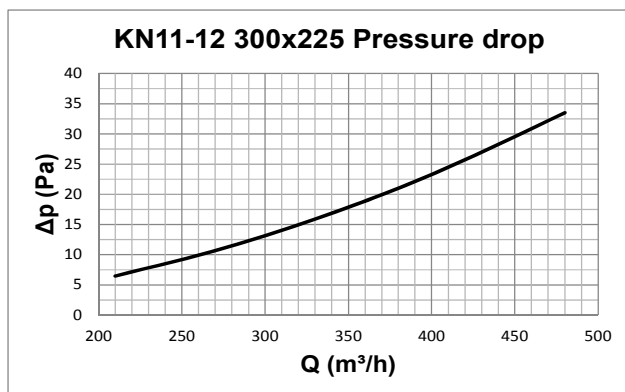


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

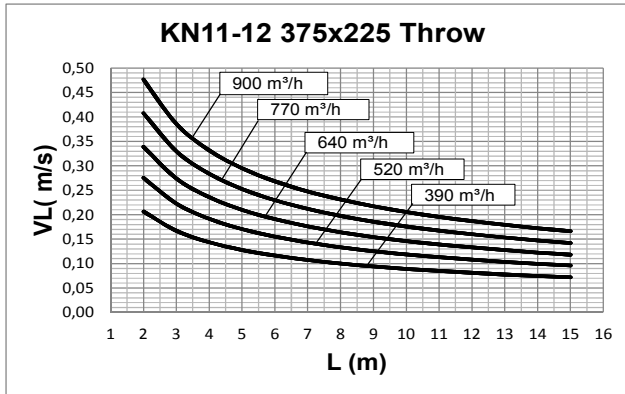




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 375x225

KN11  
KN12  
SERIES

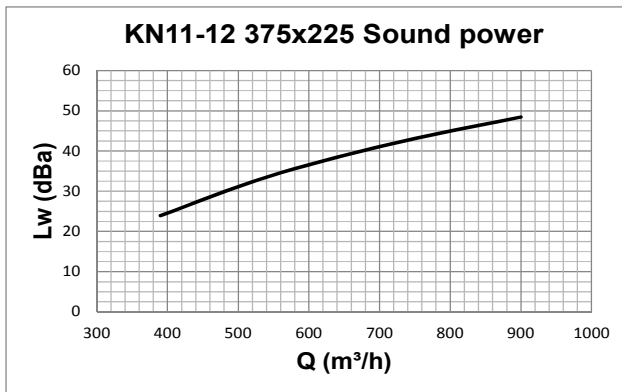


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

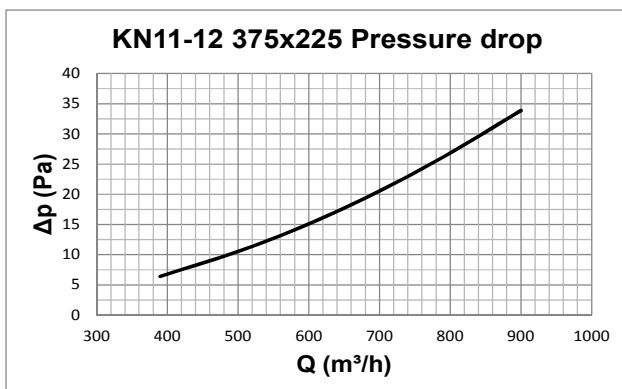


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

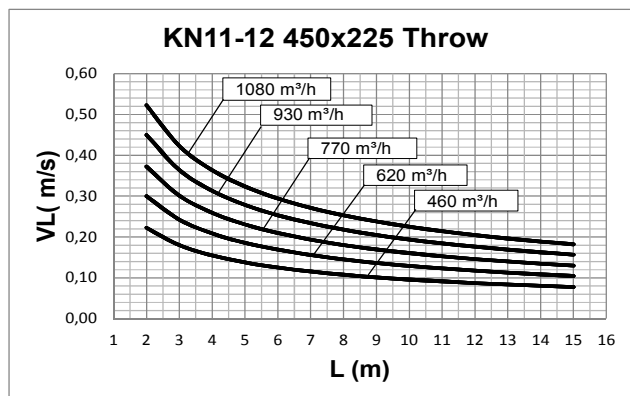




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN11  
KN12  
SERIES

PERFORMANCE KN11 - KN12 450x225

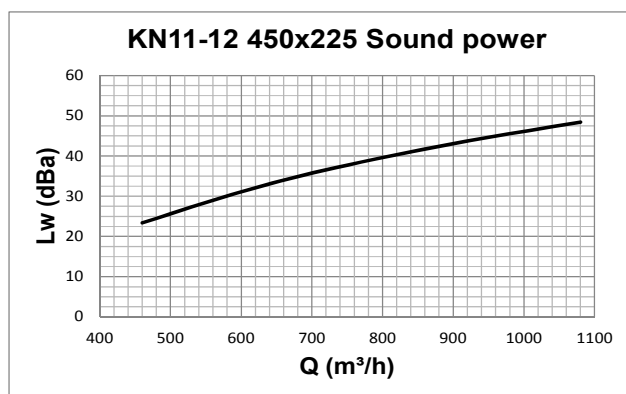


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

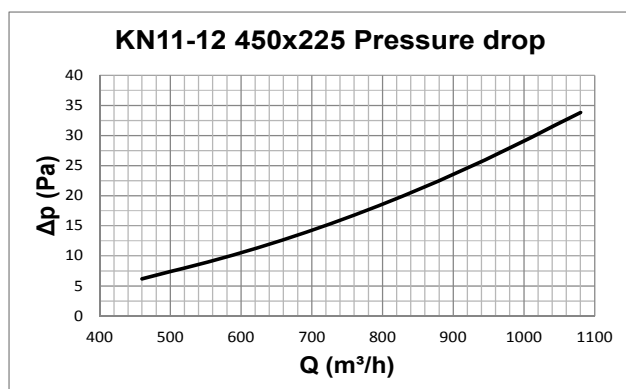


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

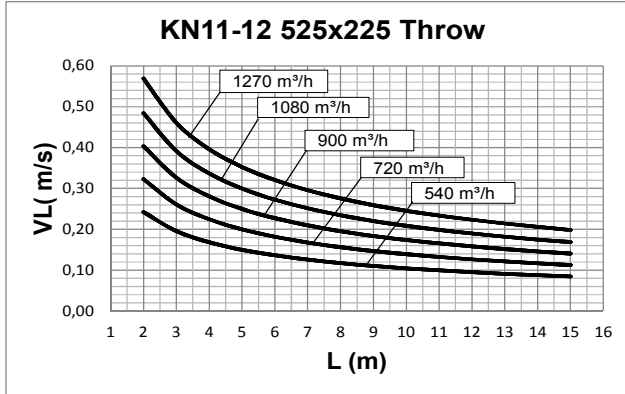




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 525x225

KN11  
KN12  
SERIES

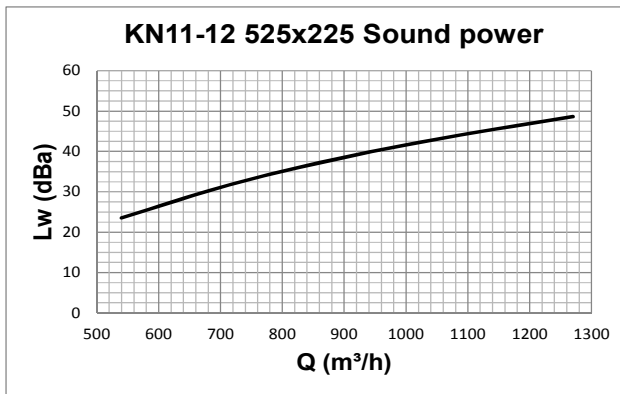


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

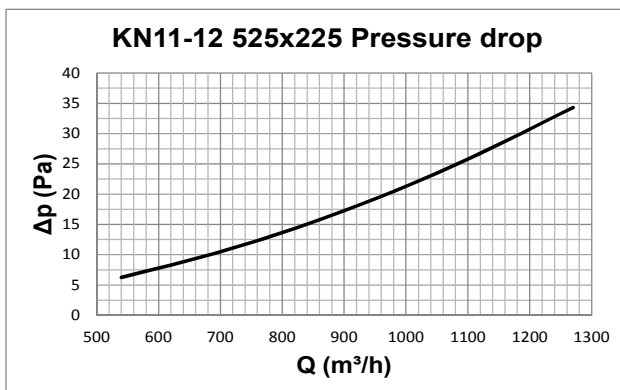


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



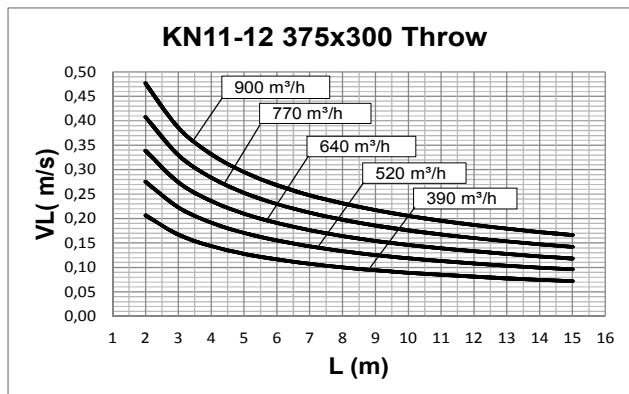




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 375x300

KN11  
KN12  
SERIES

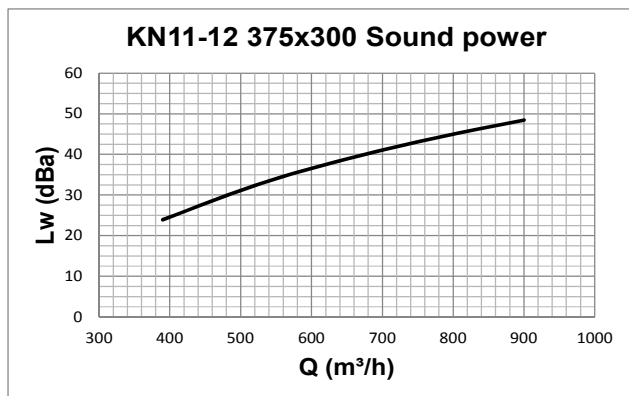


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

$L$  (m) horizontal distance in metres from the centre of the diffuser

$V_L$  (m/s) maximum speed in the air stream

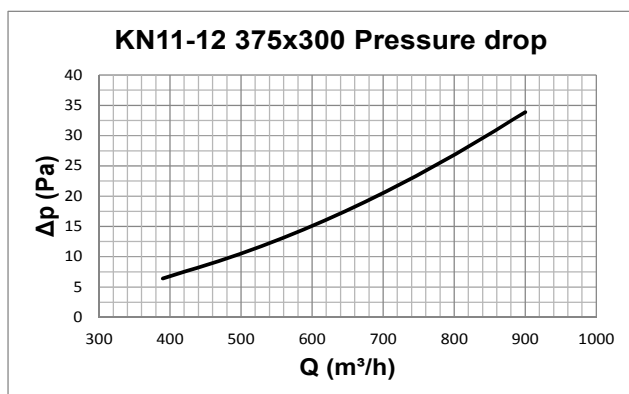


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

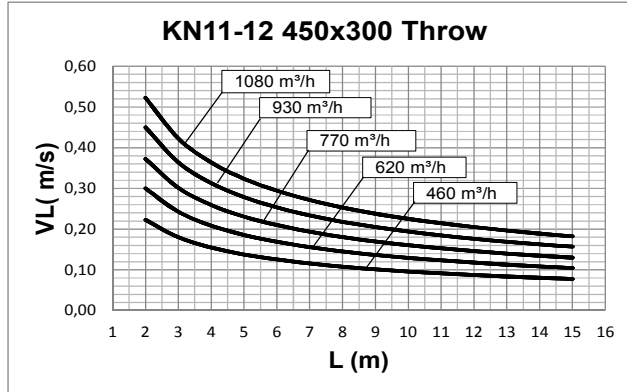




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 450x300

KN11  
KN12  
SERIES

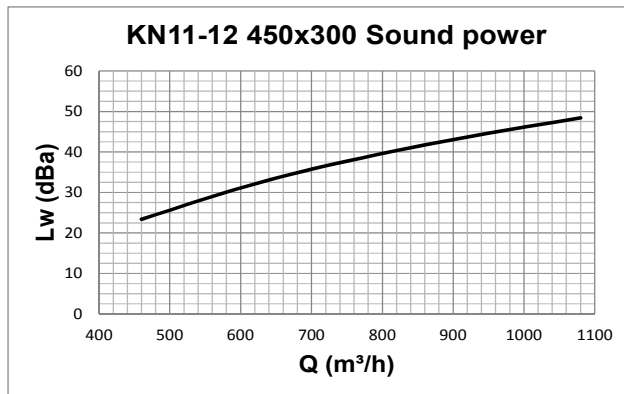


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

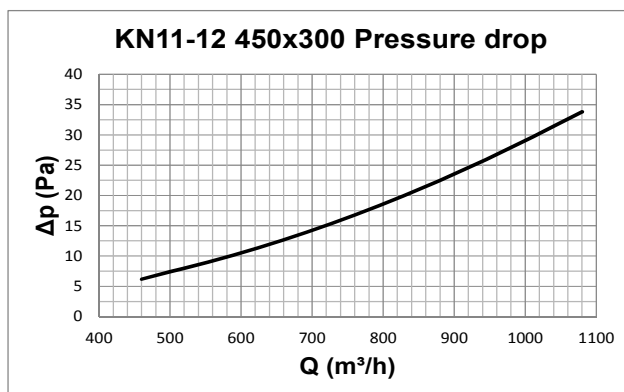


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

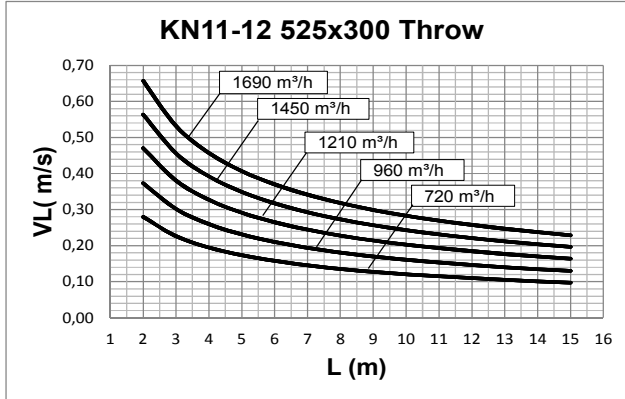




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 525x300

KN11  
KN12  
SERIES

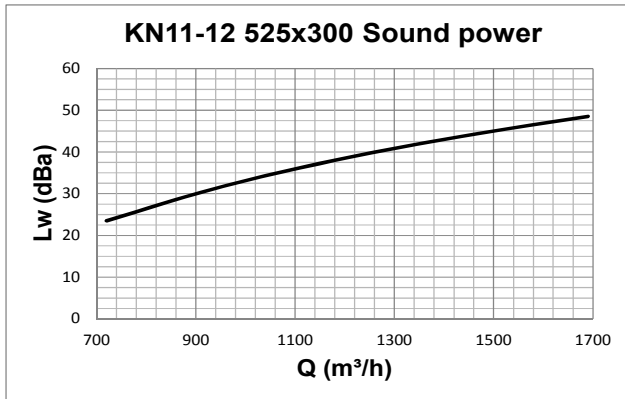


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

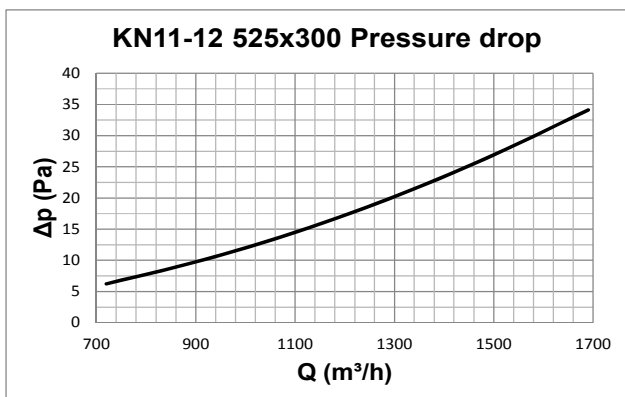


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

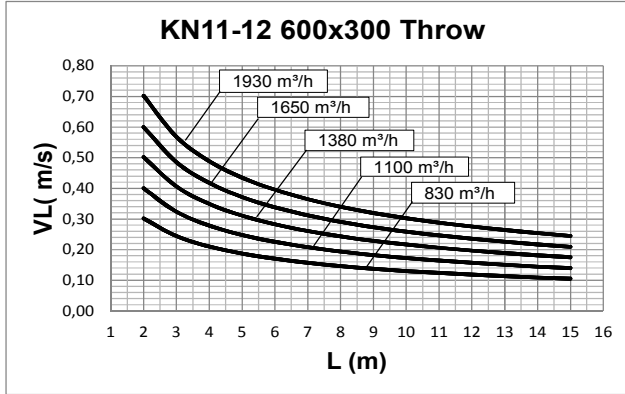




MULTIDIRECTIONAL DIFFUSERS  
FIXED RECTANGULAR GEOMETRY

KN11  
KN12  
SERIES

PERFORMANCE KN11 - KN12 600x300

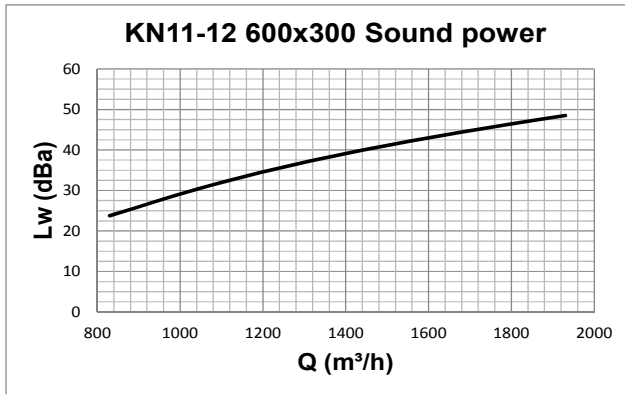


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

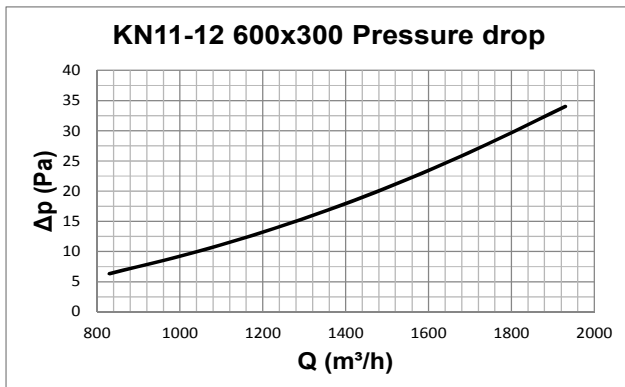


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

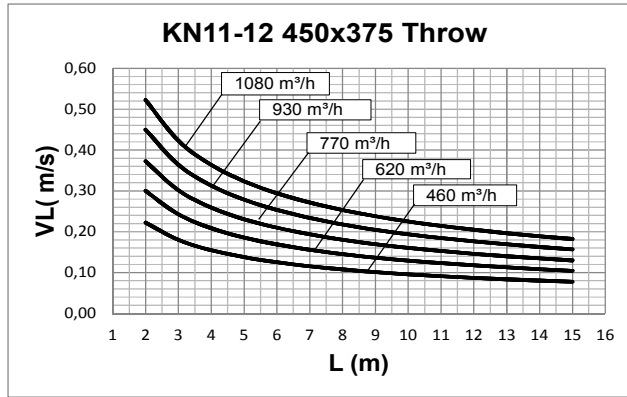




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 450x375

KN11  
KN12  
SERIES

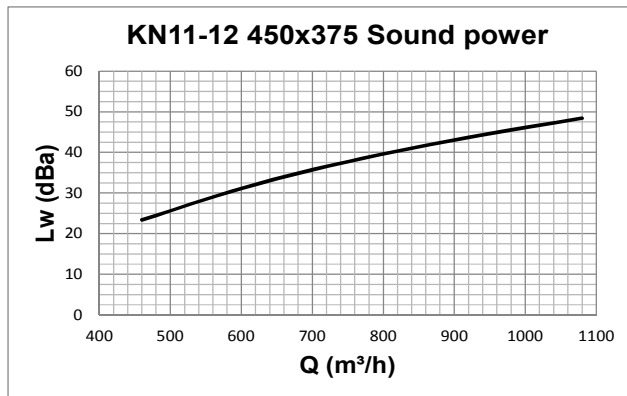


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

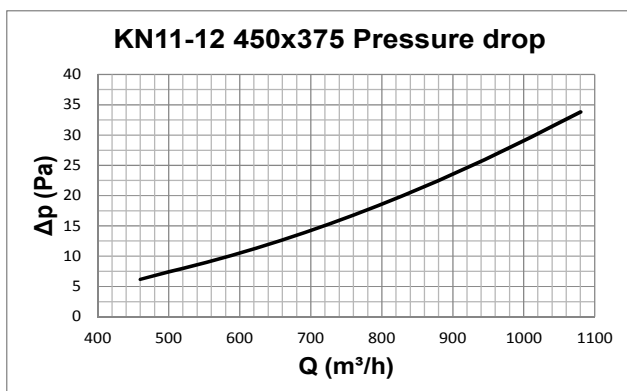


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

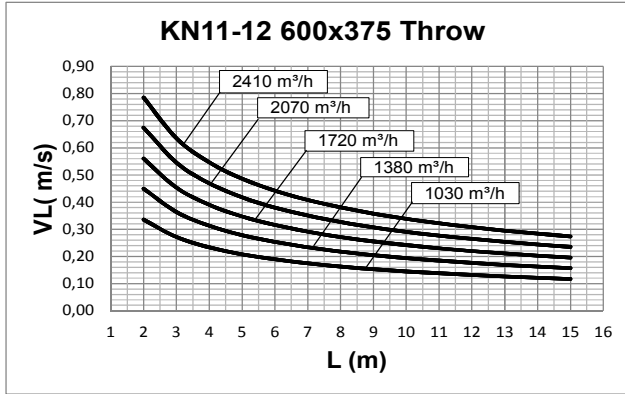




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 600x375

KN11  
KN12  
SERIES

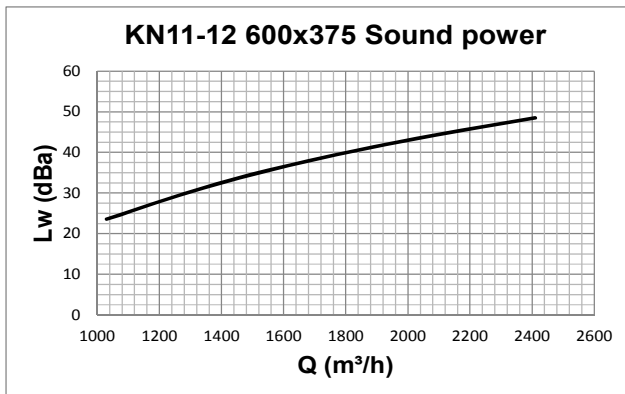


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

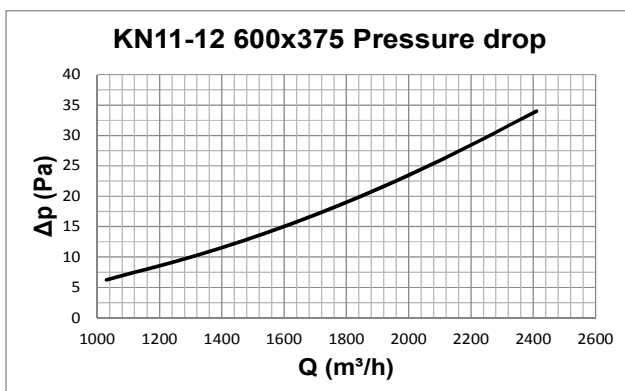


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

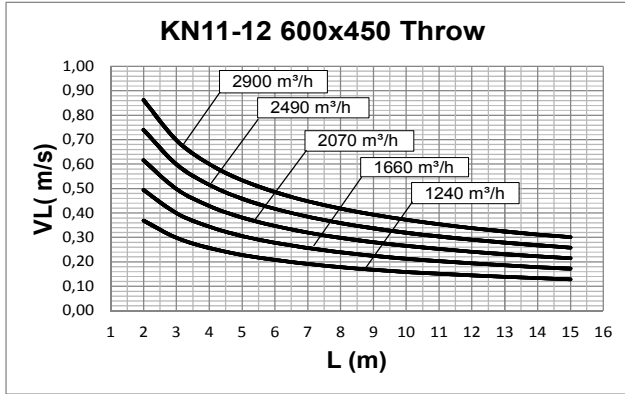




## MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

PERFORMANCE KN11 - KN12 600x450

KN11  
KN12  
SERIES

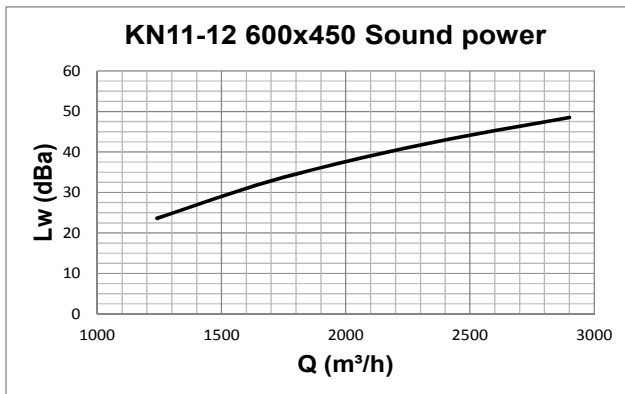


Data obtained from CFD mathematical model in virtual test chamber operating in isothermal conditions in accordance with the international standard:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream

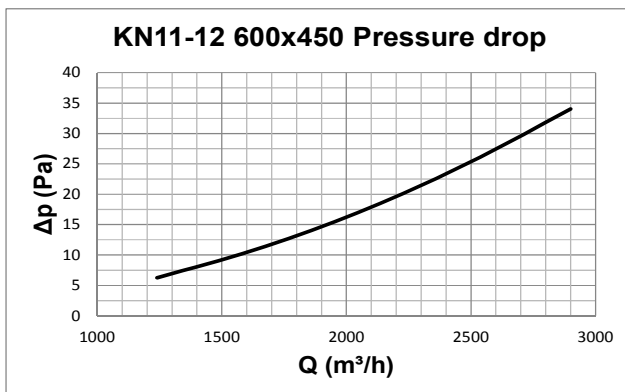


Data measured in reverberation room in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



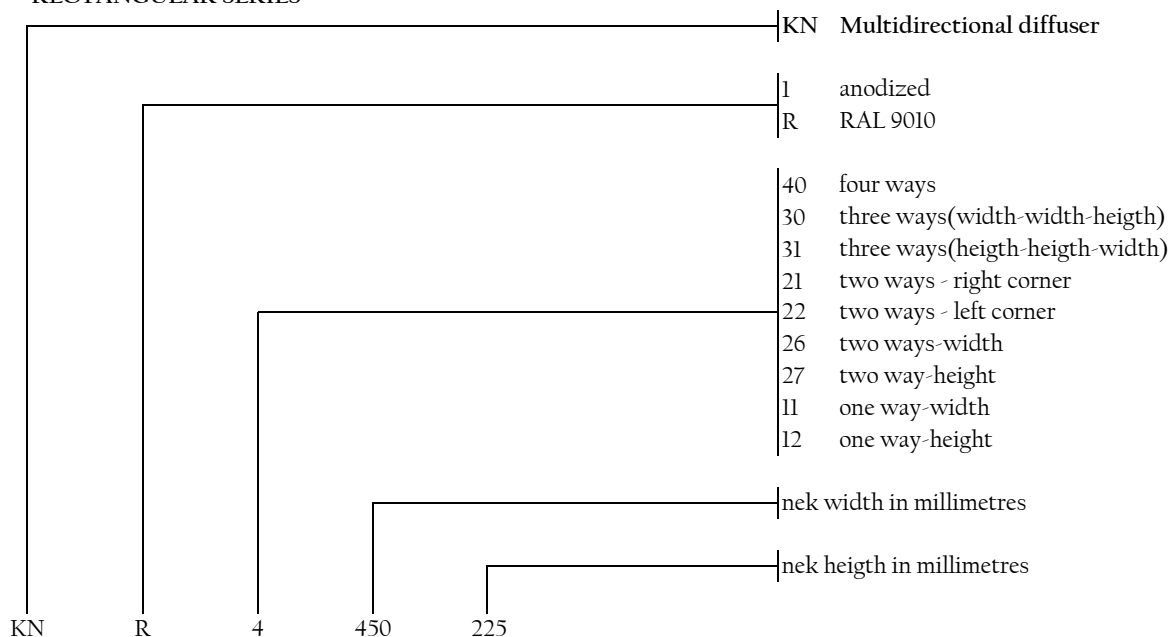


# MULTIDIRECTIONAL DIFFUSERS FIXED RECTANGULAR GEOMETRY

KN  
SERIES

CODES

## RECTANGULAR SERIES



KN40	KN30	KN31	KN21	KN22	KN26	KN27	KN11	KN12





## CONTROL DAMPERS

## SC SERIES

### OVERVIEW TECHNICAL CHARACTERISTICS

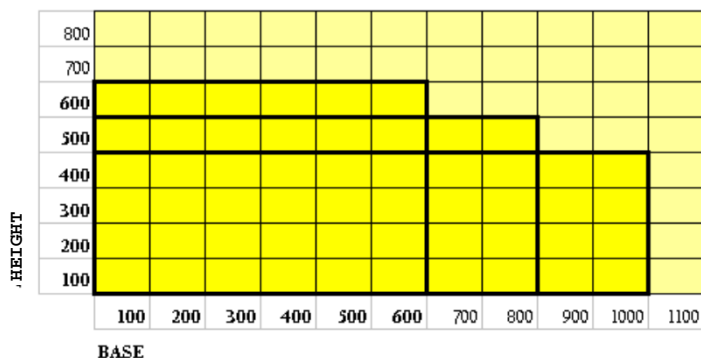
#### OVERVIEW AND CHARACTERISTICS :

The contrast control dampers of SC series can be fitted to UF KG UM UR GI KN e CR-KN series . They are held in place by special patented clips, designed both for fitting the damper to the grill and for fitting it on a false frame.

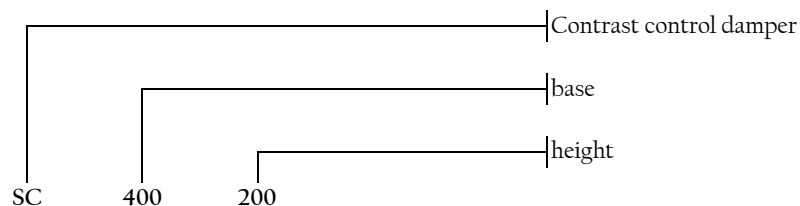
The SC series dampers are made entirely of galvanised steel and have a mechanism for moving and closing all the blades simultaneously.

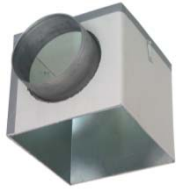
This mechanism is a simple longitudinal plate that links all the blades, and can be removed by unscrewing a nut using a screwdriver. The careful design, precise assembly, and the quality of the materials used, make this an economical, practical, and efficient component.

Contrast control damper- dimensions that can be created in a single solution



application on KN or CR-KN

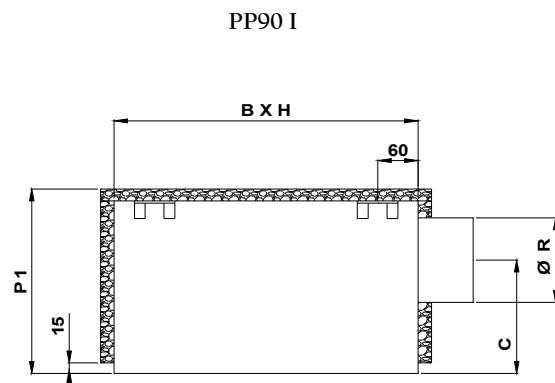
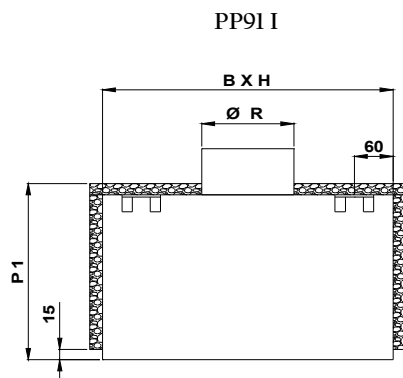
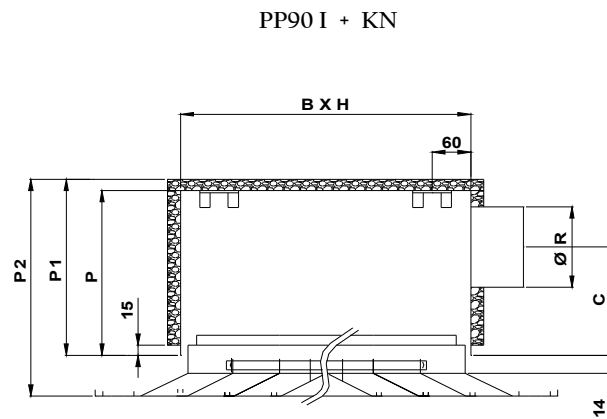
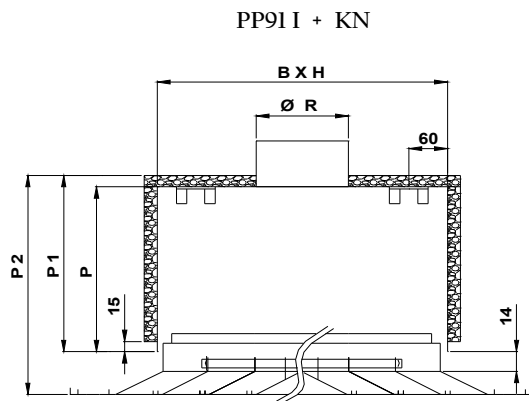




# PLENUM FOR MULTIDIRECTIONAL DIFFUSERS FIXED GEOMETRY

OVERVIEW AND TECHNICAL CHARACTERISTICS

PP 90  
PP 91  
SERIES



B	x	H	P2	P1	P	Ø R	Connection	C	N° Couplins
150	x	150	254	216	210	123	ABS (*)	112	2
225	x	225	274	236	230	143	Steel	120	2
300	x	300	334	296	290	195	ABS (*)	155	2
375	x	375	334	296	290	195	ABS (*)	155	2
450	x	450	394	356	350	253	ABS (*)	185	4
525	x	525	444	406	400	296	Steel	215	4
600	x	600	444	406	400	296	Steel	215	4

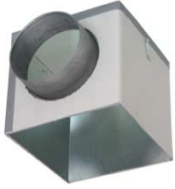
(\*) Steel on request

## CONSTRUCTION CHARACTERISTICS:

**MATERIALS :** The plenum is manufactured from galvanized sheet steel, external insulation has fire reaction class I.

**MOUNTING OF PLENUM :** The plenums are fixed and adjusted to the ceiling by threaded bars, putted into suitable supports.

**MOUNTING OF DIFFUSER:** The diffusers have to be fixed on the plenum by screws directly on the plenum's assembly bar.



PLENUM FOR  
MULTIDIRECTIONAL DIFFUSERS  
FIXED GEOMETRY

HOW TO ORDER

PP 90  
PP 91  
SERIES

