



HIGH INDUCTION LONG THROW DIFFUSERS FOR DEEP JET

KVCT
SERIES

WITH AUTOMATIC REGULATION
WITH THERMOSTATIC SPRING

OVERVIEW

The KVCT diffuser series come equipped with a thermostatic return spring to regulate the angle of the jet.

THROW REGULATION

To obtain the best heating comfort levels it is necessary to direct the flow of air downwards to eliminate the stratification of the air. Where as in cooling conditions is best to aim the flow of air towards the ceiling to eliminate the forming or air currents in the occupied zone.

The KVCT diffusers automatically regulate the angle of the jet to obtain the optimal throw angle.

The temperature of the injected air is in fact determines the extension or retraction of the thermostatic spring which itself determines the rotation of the jet downwards or upwards.

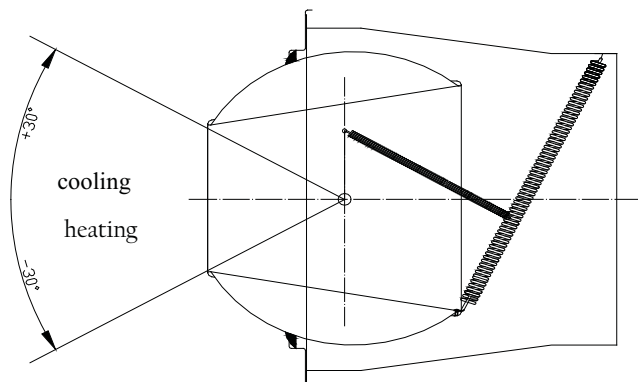
By choosing the KVCT diffuser it is possible to eliminate:

- electric thermostats;
- electrical wiring system;
- servomotors.

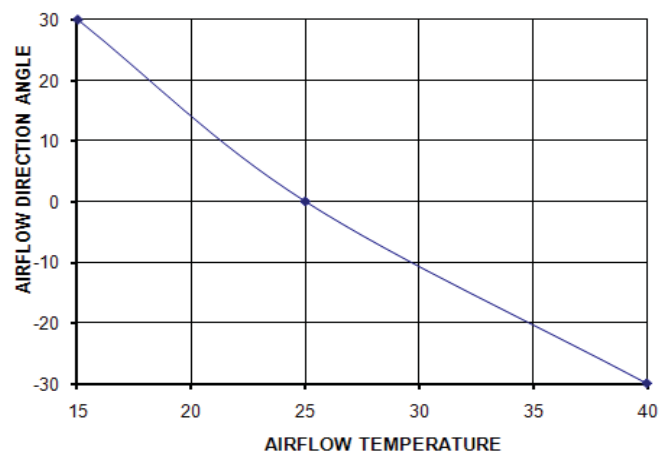
The maximum range is $\pm 30^\circ$. This can be limited to smaller angles, with a 5° pitch even with a different regulation for heating and cooling, by inserting and regulating stop screws on a predisposed metal plate. The memory of the form of the spring guarantees the precise relation between the injected air and the inclination angle for an also unlimited number of cycles.

AERAUIC TEST

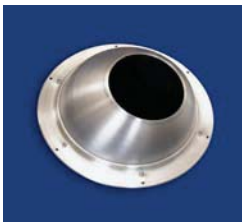
The aeraulic performance of the KVCT diffusers are, in relation to the diameter, is the exact same as for those of the equivalent KV series diffuser.



AVERAGE DIRECTIONAL AIRFLOW ANGLE IN
RELATION TO THE TEMPERATURE OF THE AIRFLOW



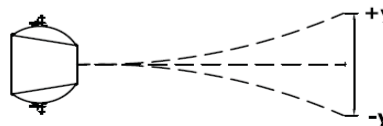
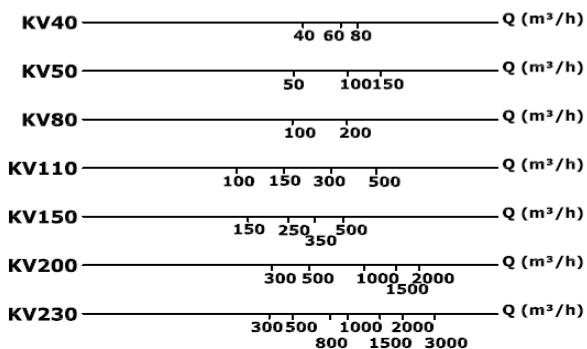
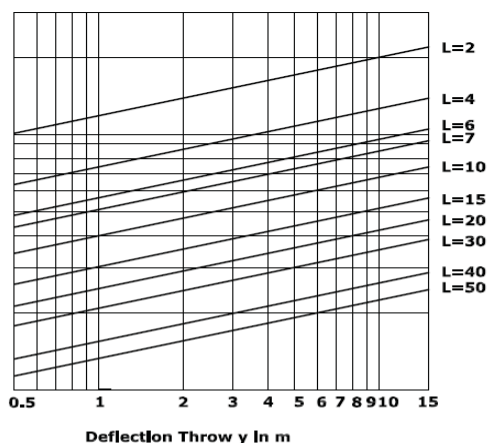
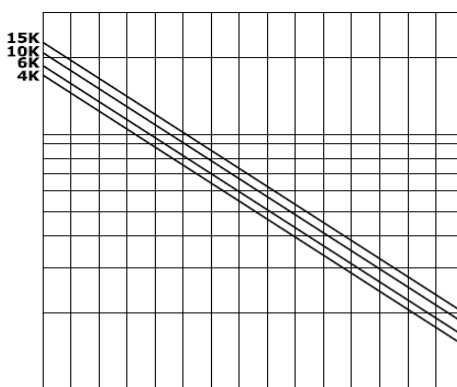
CODES	
KVCT150	Jet diameter 150mm with flange and counter flange thermostatic spring
KVCT200	Jet diameter 200mm with flange and counter flange thermostatic spring
KVCT230S	Jet diameter 230mm without internal cone with flange and counter flange thermostatic spring
KV-C150	Screw cover for jet diameter 150mm
KV-C200	Screw cover for jet diameter 200mm
KV-C230	Screw cover for jet diameter 230mm



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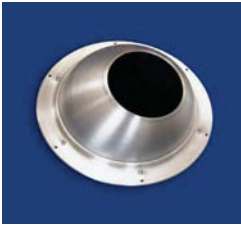
KV
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PERFORMANCES



ΔK temperature difference between injected air and ambient temperature

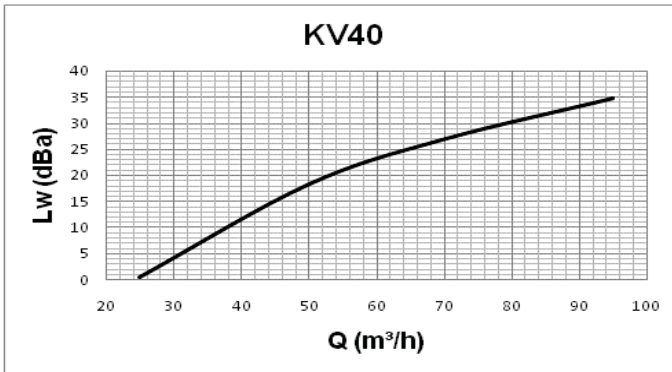
The diagram allows to obtain the width of the opening of the throw at the preferred distance from the diffuser. On the line relative to the size of the diffuser, trace a vertical line from the required air flow rate. At the intersection between this line and the line at an angle relative to the temperature difference chosen, trace a second horizontal line. At the intersection between this line and the that at an angle relative to the distance that is of interest, trace a third vertical line. On the diagram scale of the right hand side, it is therefore possible to read the opening of the throw in the required conditions.



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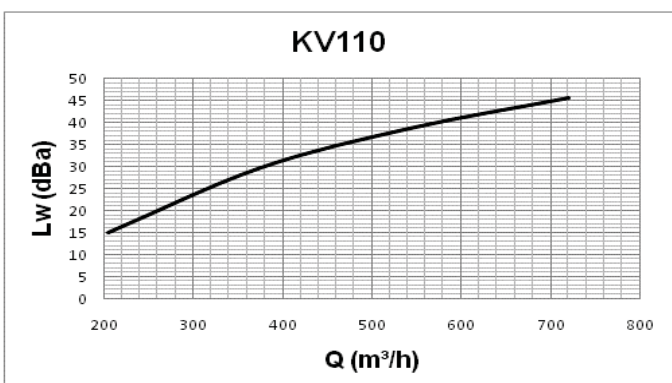
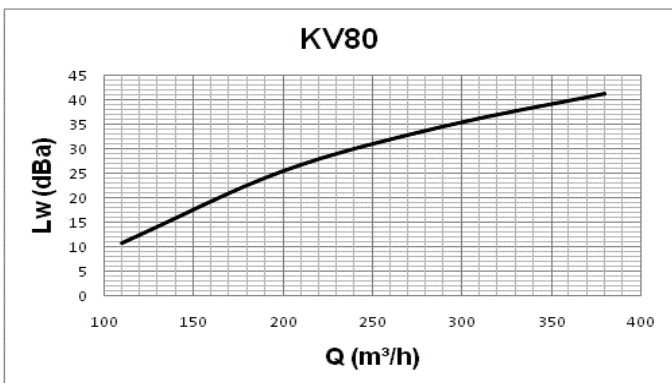
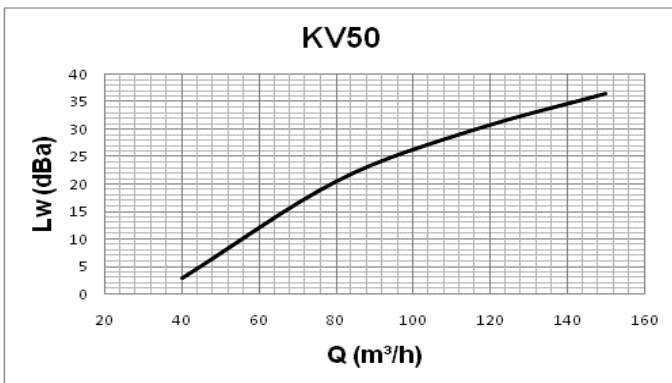
SOUND POWER

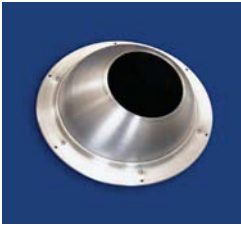


Data measured in reverberation chamber in accordance with international standards:
 ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

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 shown data does not take into consideration the attenuation resulting from the surroundings where the diffuser is installed. Such attenuation is normally included between 6 and 10 dBa and is determined by the size of the surrounding space, its shape and the characteristics of the furniture and room fittings.

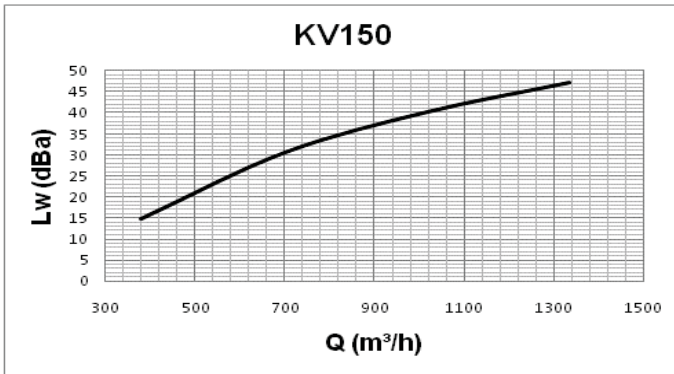




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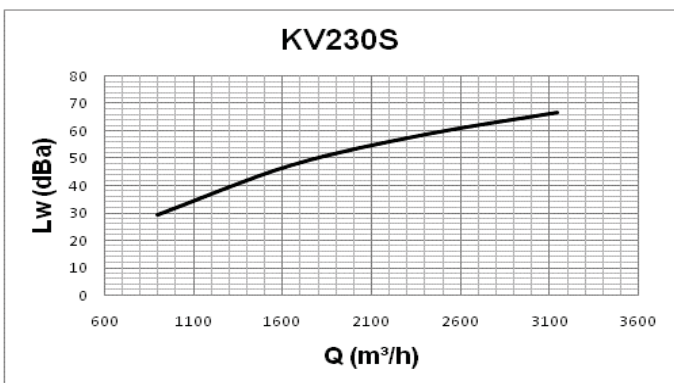
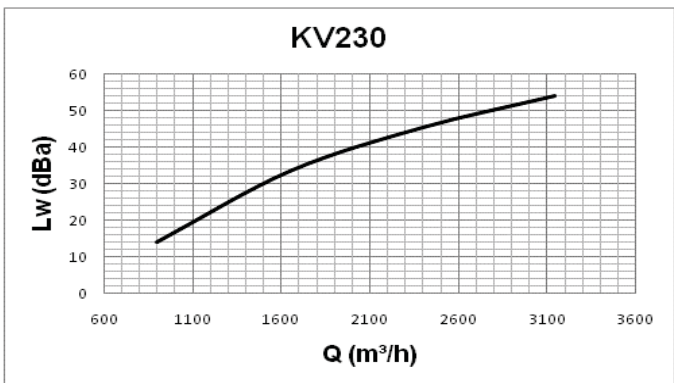
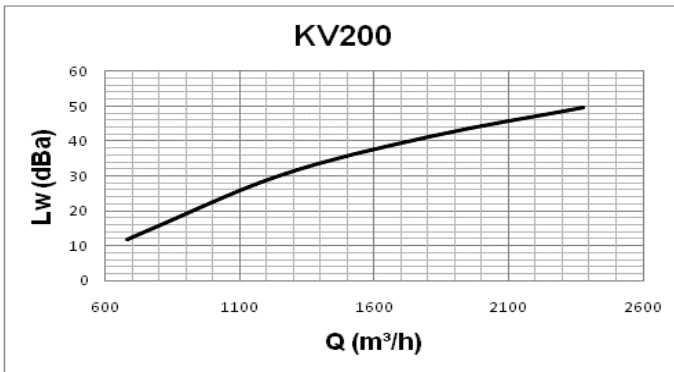


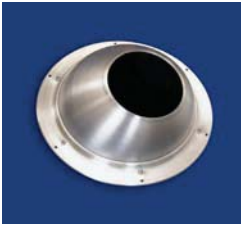
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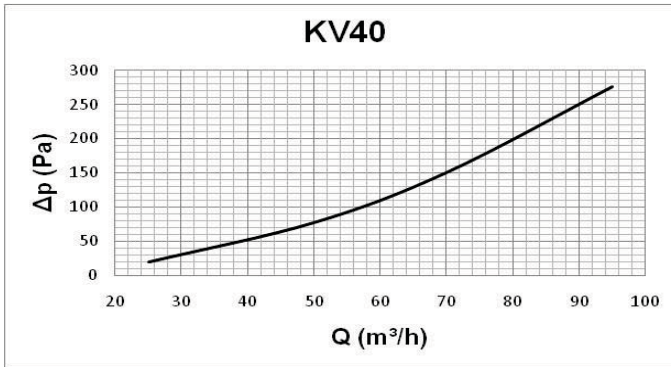




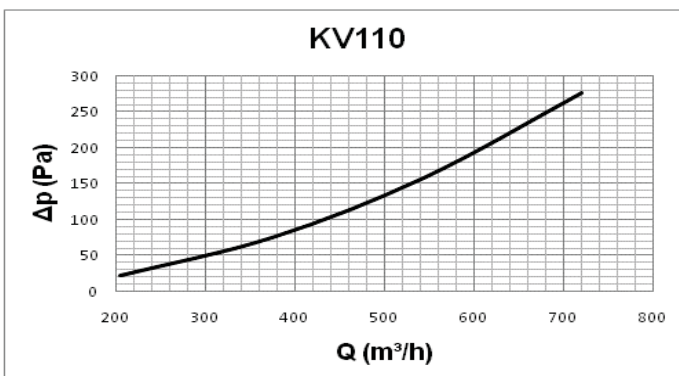
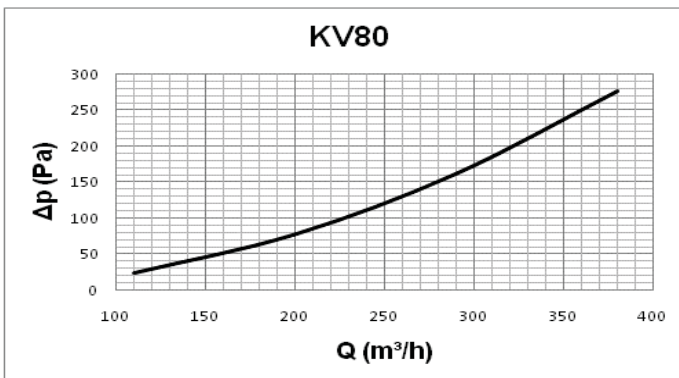
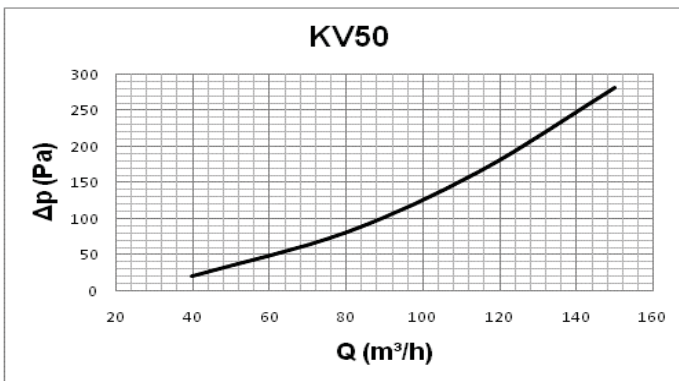
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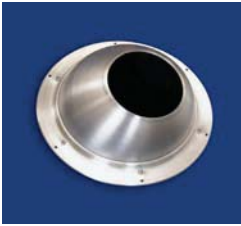
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PRESSURE DROP



Data obtained from mathematical modelling in CFD test chamber operating in virtual agreement with the International Standard: ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

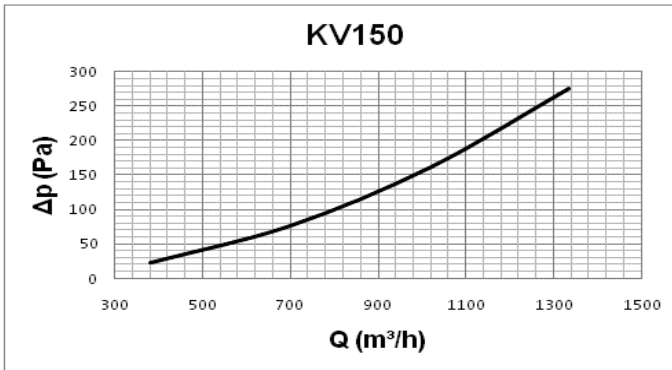




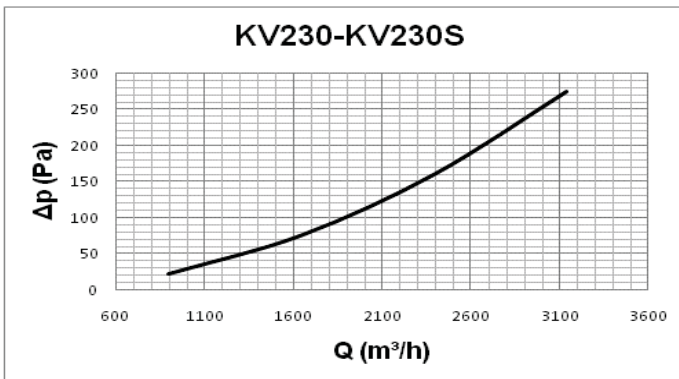
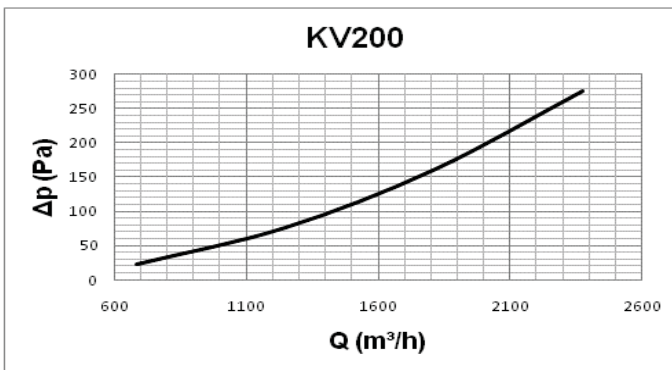
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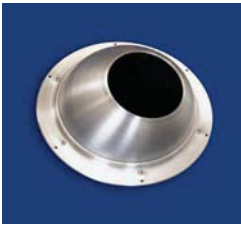


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fluid dynamic analis carried out at

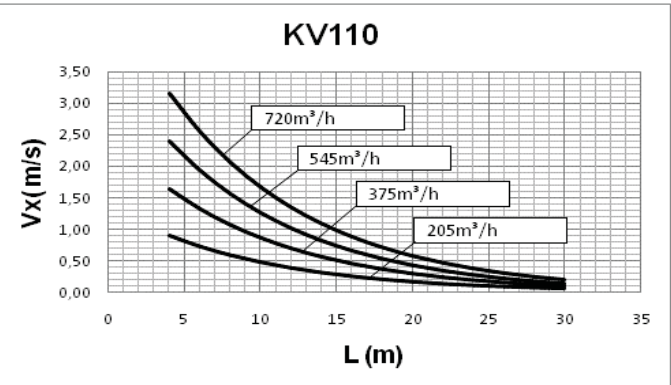
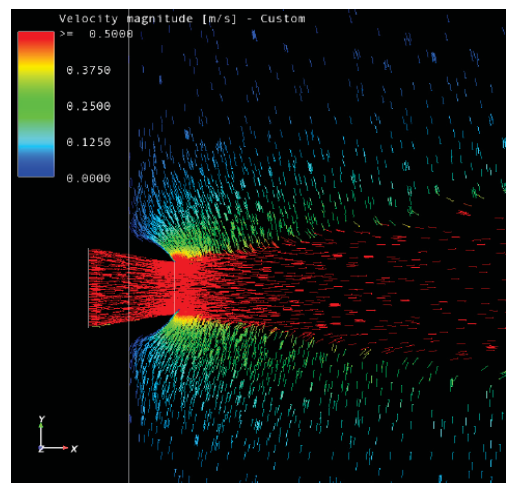
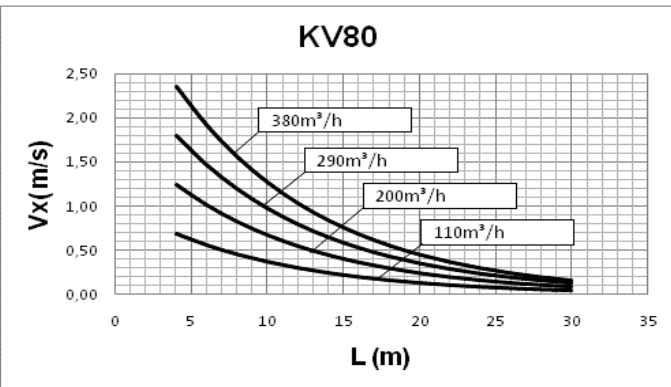
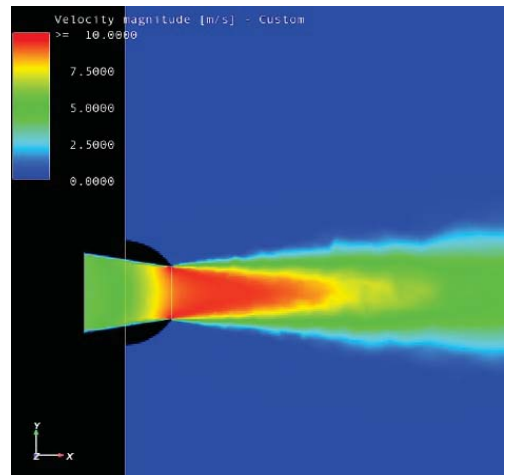
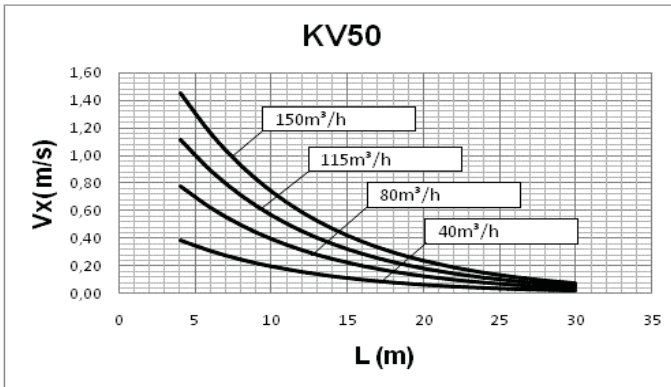
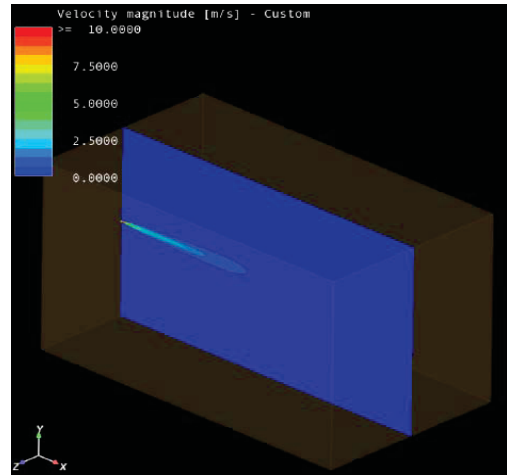
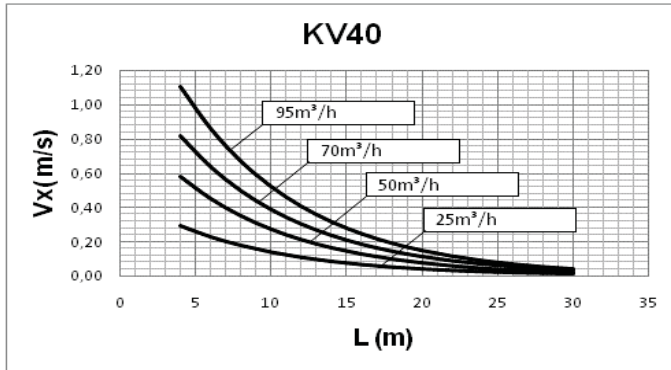


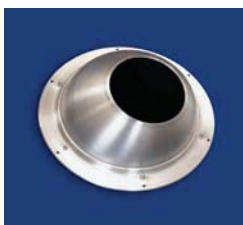


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AERAUIC DATA

KV SERIES

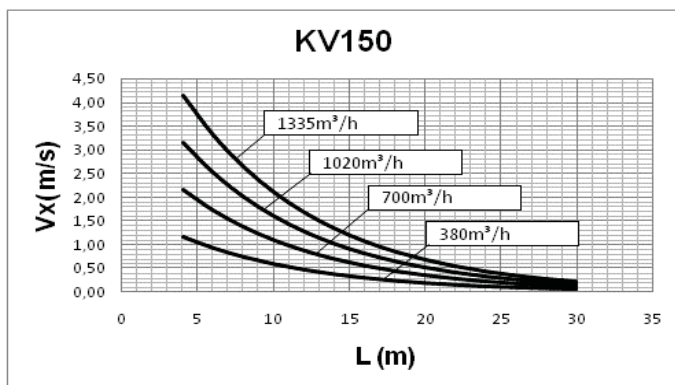




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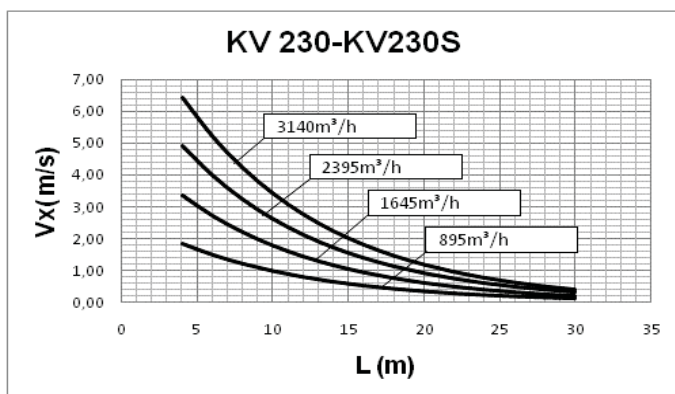
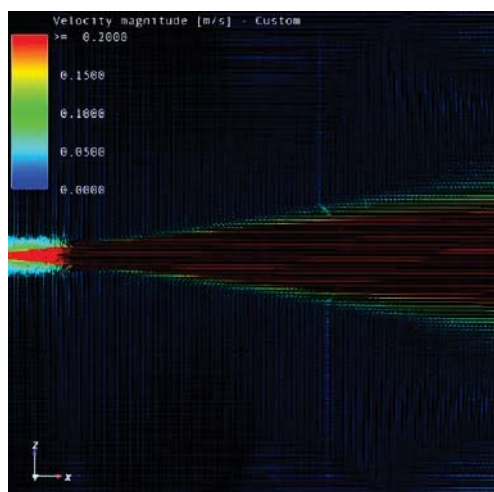
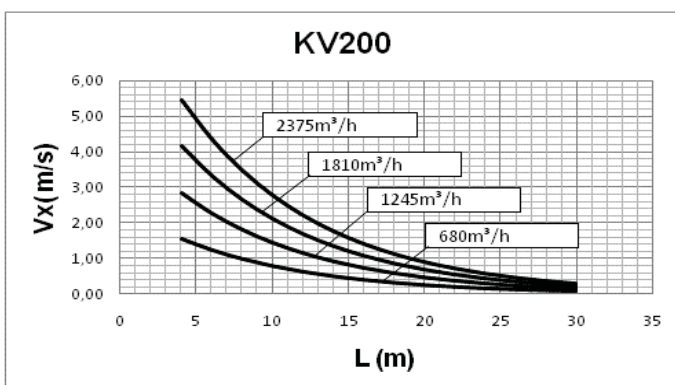
AERAULIC DATA

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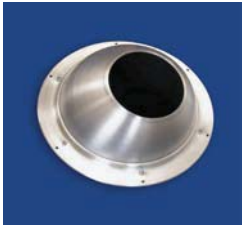
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L (m) horizontal distance from the centre of the diffuser
Vx (m/s) maximum speed inside the air stream



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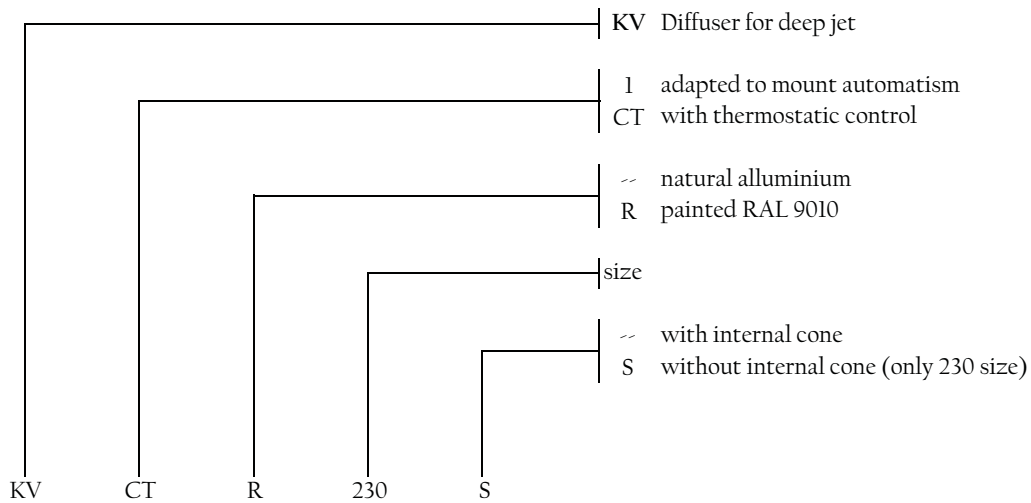




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KV
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CODES AND ACCESSORIES



ACCESSORIES				
Model	Cover screws flange		Connector	
	Anodized	RAL 9010	Circular duct	Flexible duct
KV40	KV-C40	KVR-C40	KV-RC40*	KV-RF40
KV50	KV-C50	KVR-C50	KV-RC50*	KV-RF50
KV80	KV-C80	KVR-C80	KV-RC80*	KV-RF80
KV110	KV-C110	KVR-C110	KV-RC110*	KV-RF110
KV150	KV-C150	KVR-C150	KV-RC150*	KV-RF150
KV200	KV-C200	KVR-C200	KV-RC200*	KV-RF200
KV230	KV-C230	KVR-C230	KV-RC230*	KV-RF230

* when ordering, it is important to specify the duct diameter required