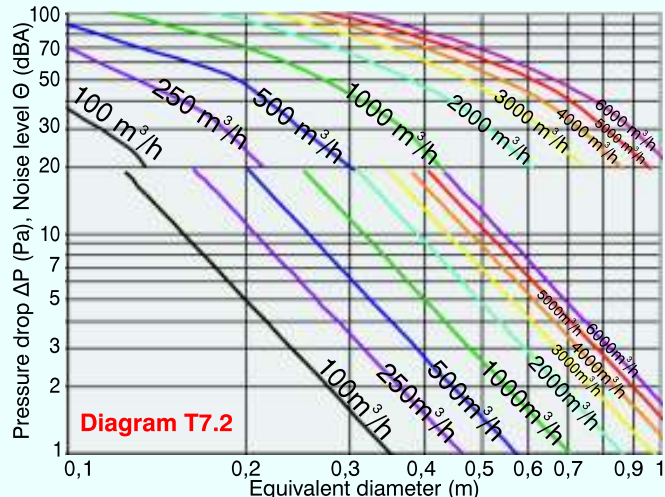
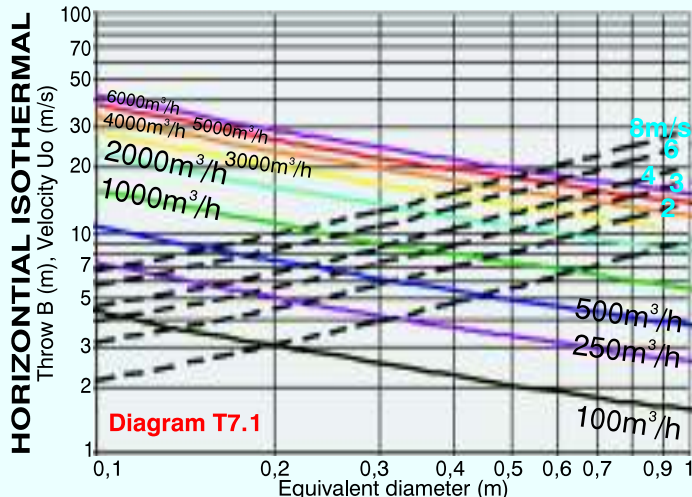
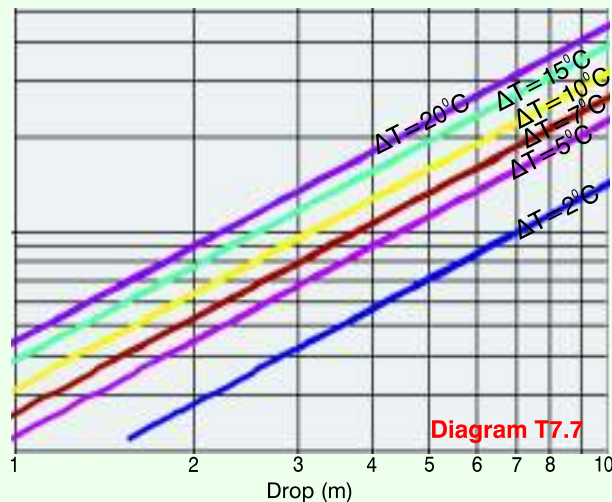
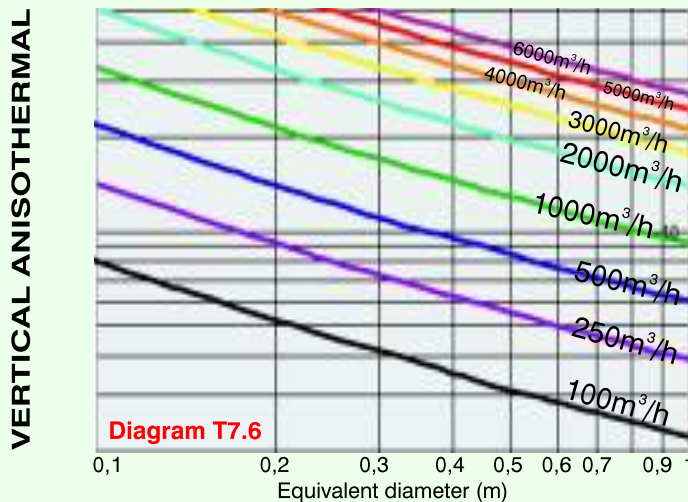
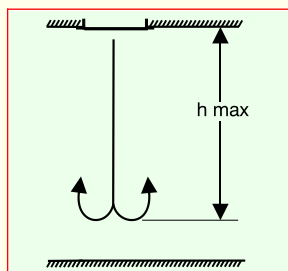
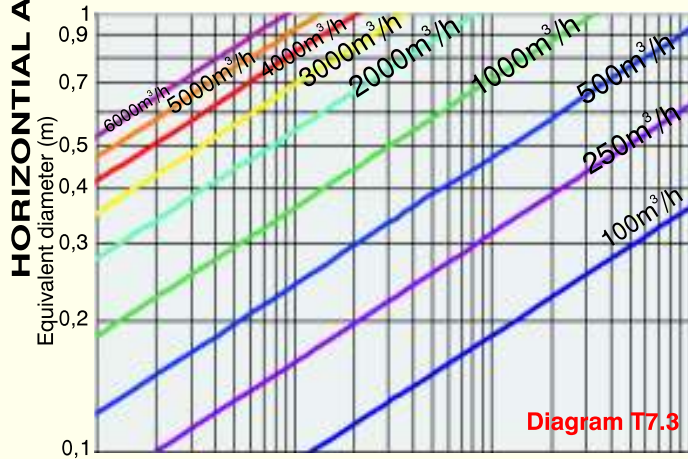
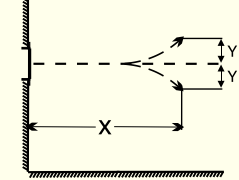
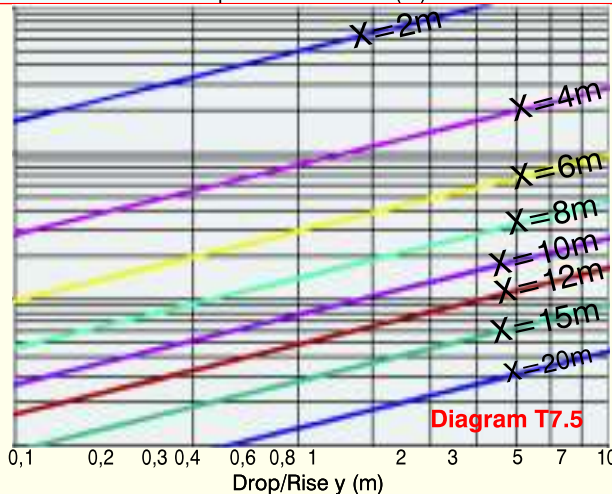
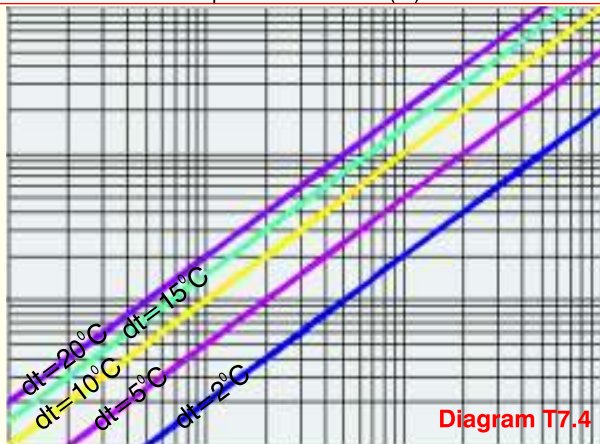


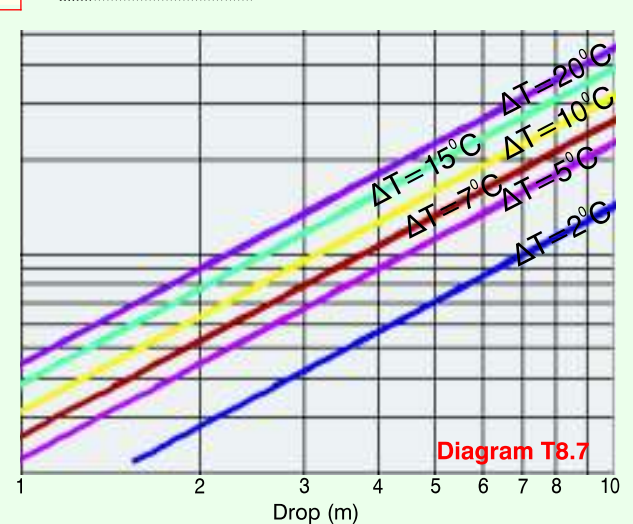
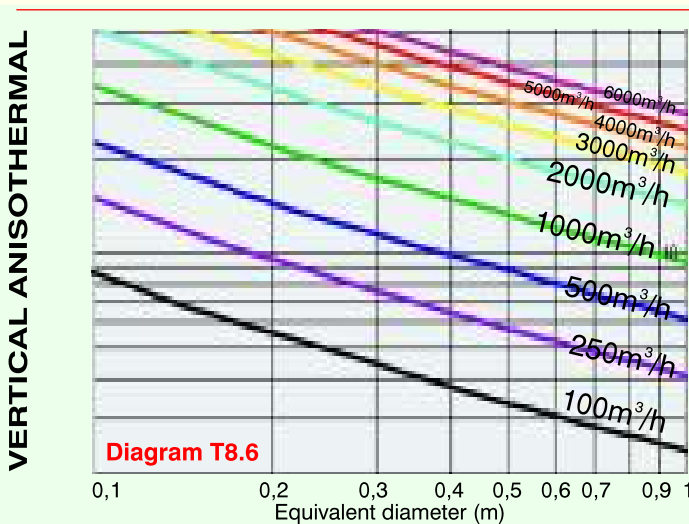
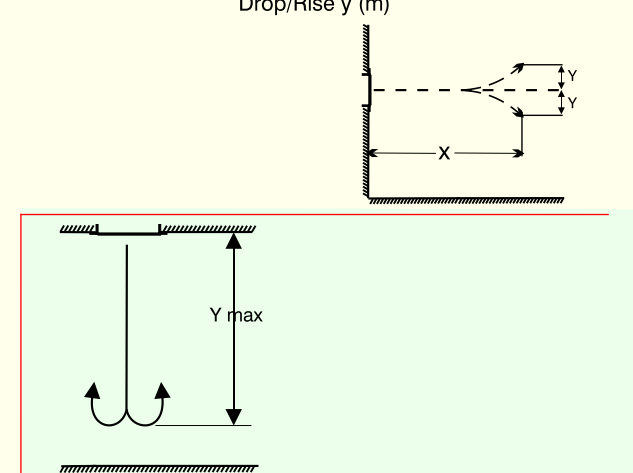
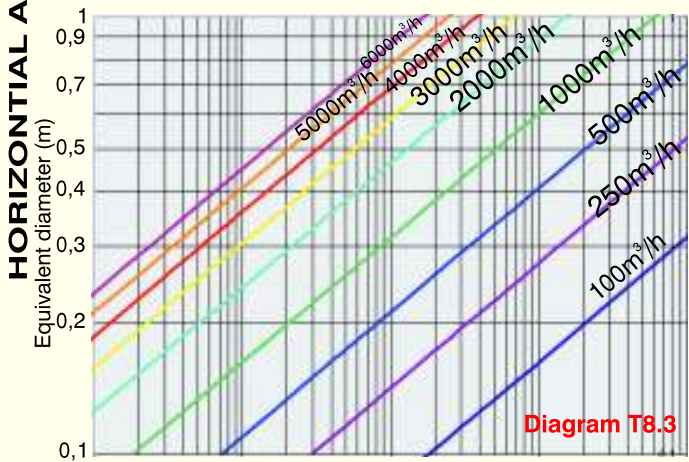
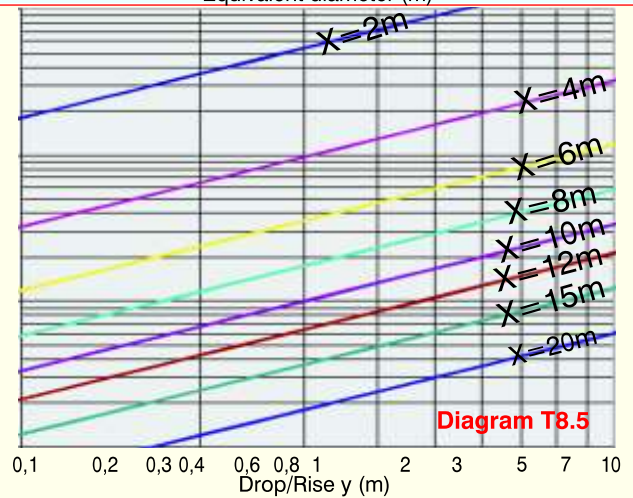
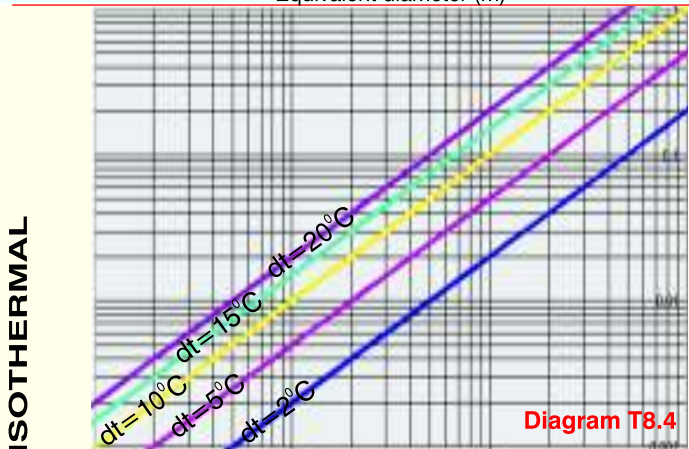
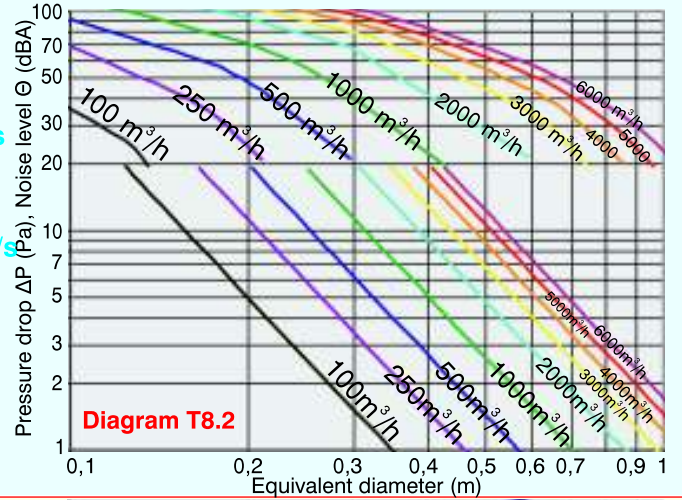
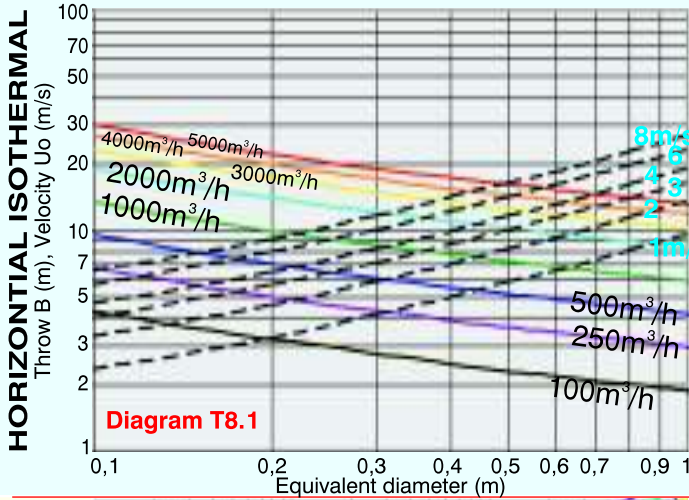
LINEAR GRILLES - SERIES T - Selection Diagrams



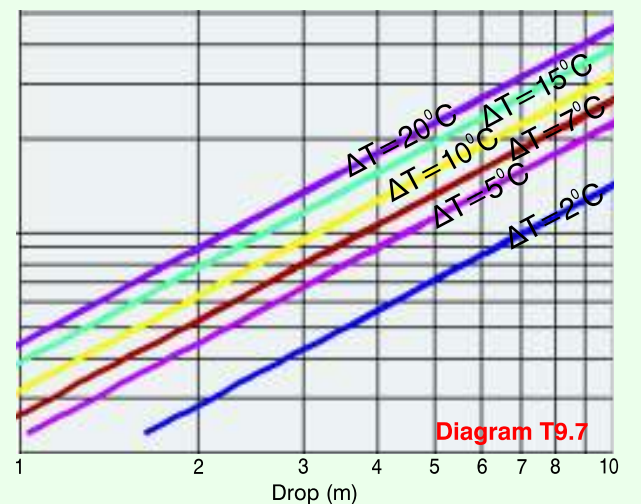
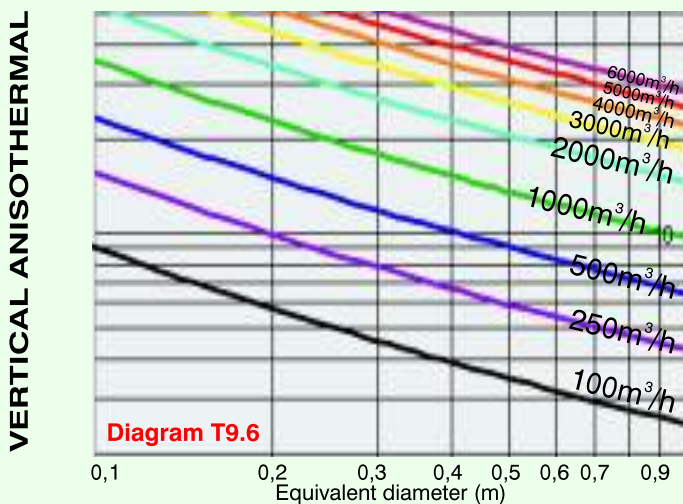
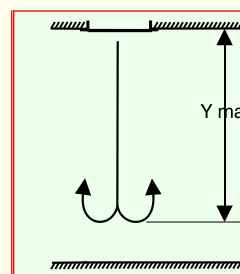
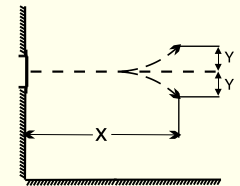
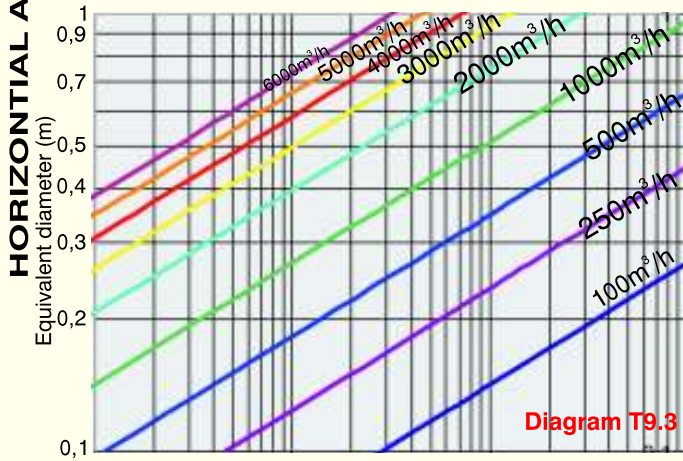
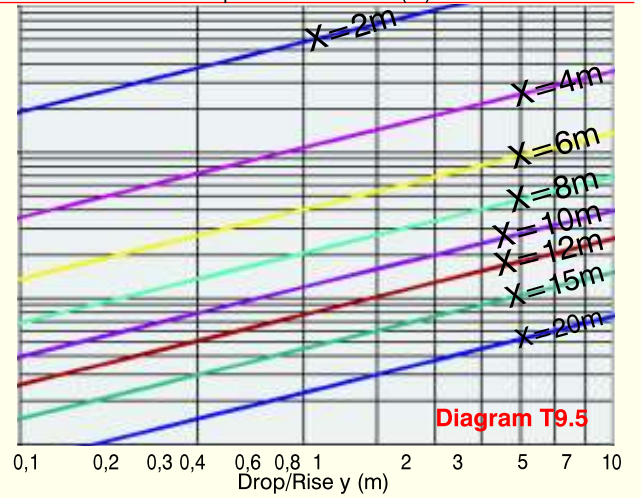
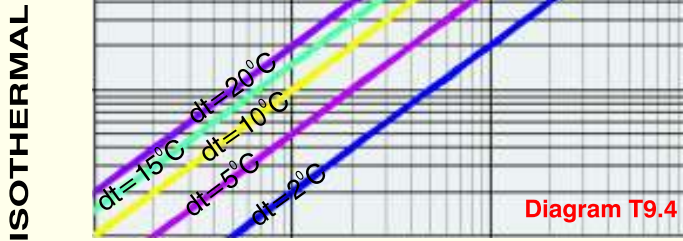
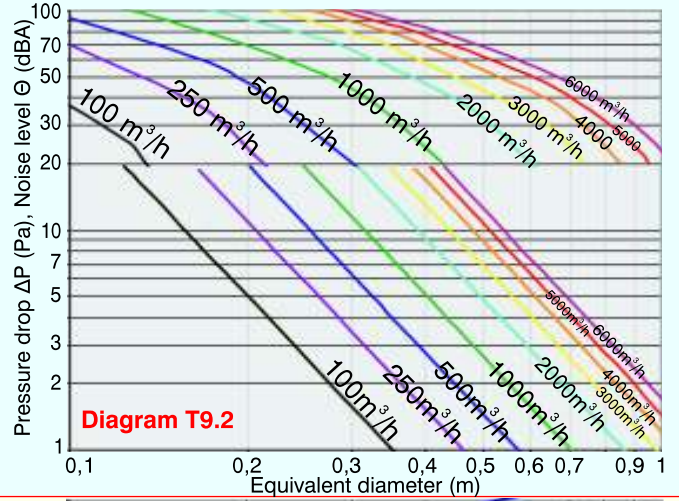
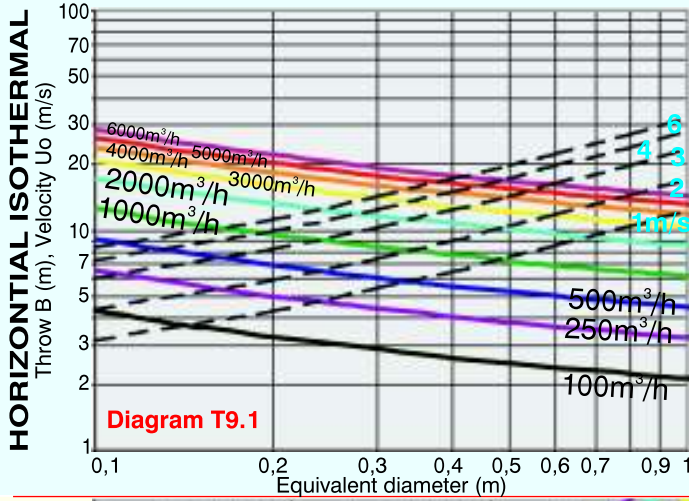
HORIZONTAL ANISOTHERMAL



VENTILATION GRILLES - SERIES T - Selection Diagrams



VENTILATION GRILLES - SERIES T - Selection Diagrams



VENTILATION GRILLES - SERIES T - Inclined vertical blades Selection examples



In case that T2 vertical blades form an angle with a plane perpendicular to the grilleface, the resulting jet is of a different morphology and possesses different characteristics than the one predicted in diagrams of pages T5 to T9. The following diagrams summarize the differences in pressure drop ΔP (Diagram T10.1), in noise level Θ (Diagram T10.2) and throw B (Diagrams T10.3 & 4) for inclination angles of 22° and 45° , as opposed to 0° inclination. The resulting air jet configurations are depicted in Figure T1.

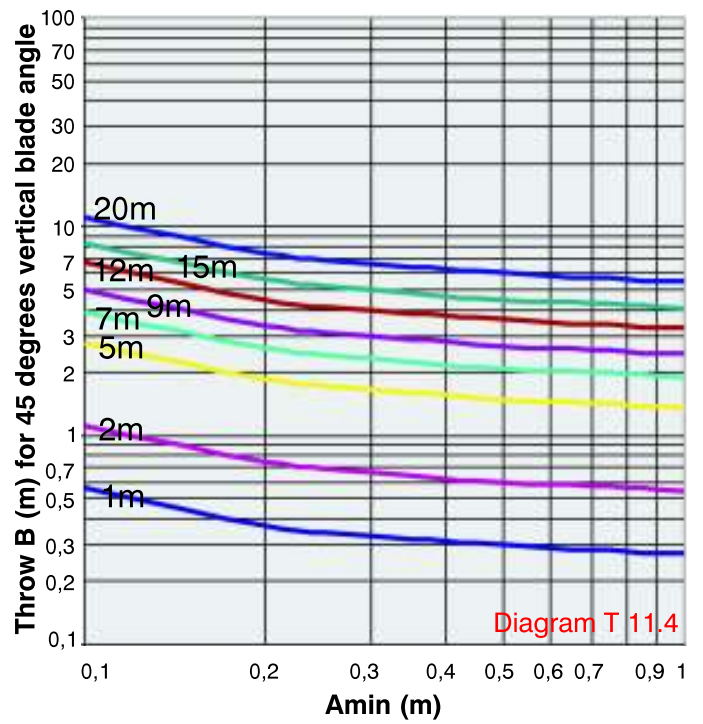
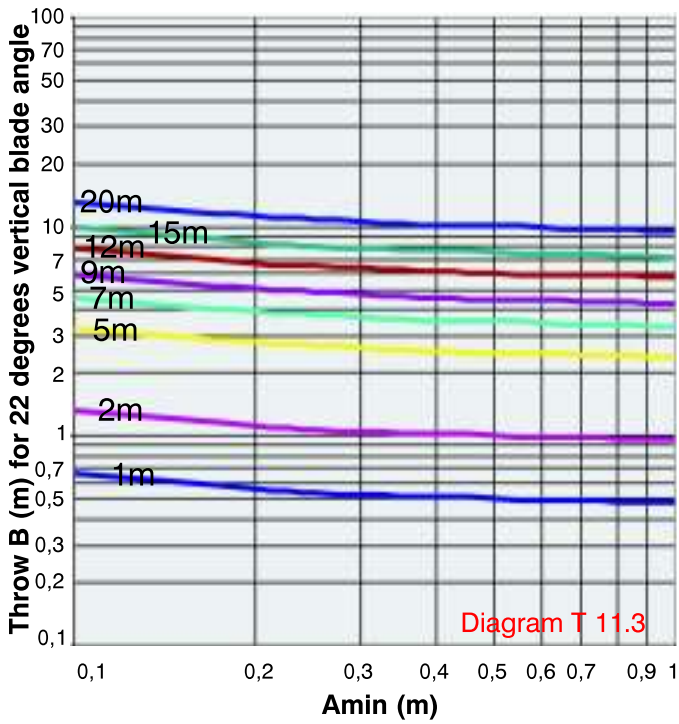
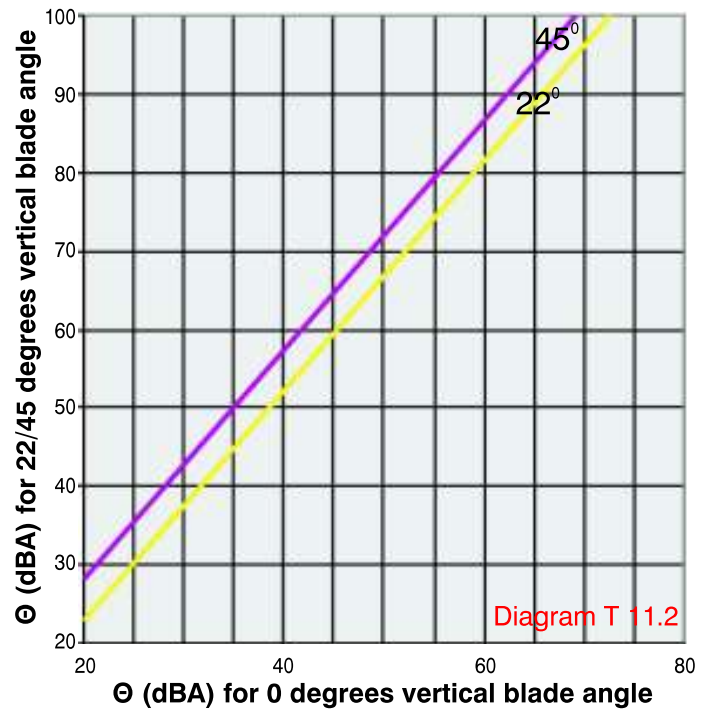
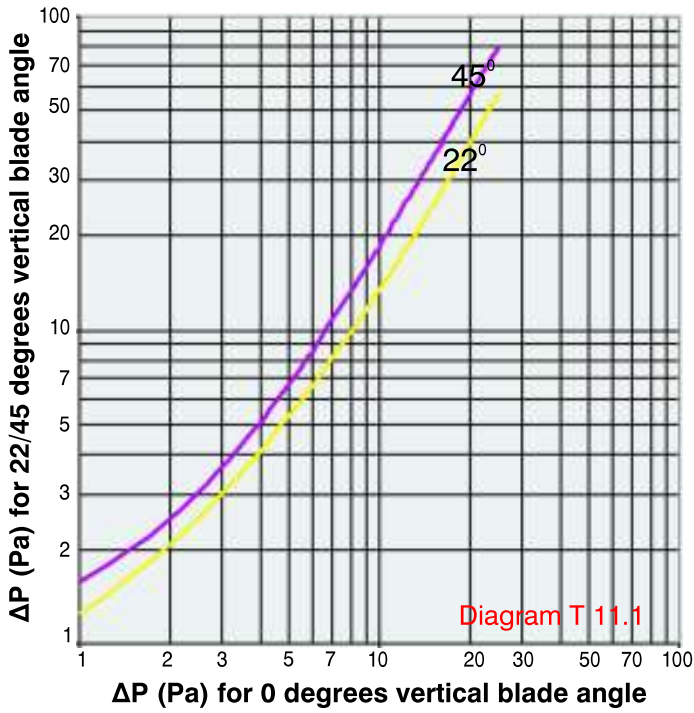
Selection examples

For ventilating a medium sized shop space, T2 ventilation grilles have been chosen. The grilles are to be mounted on the ventilation air ducts sides. Their height cannot exceed 0,3 m and the distance between them is 1,5 m. If five of these grilles are to be mounted on an air duct 8 m long, what is the appropriate flow rate in order to cover effectively the space at least 2 m from the duct, having a throw not less than 5 m?

The grilles total width cannot exceed 8m - 1,5m x 4 intervals = 2 m. Thus, their width should be 2 m / 5 = 0,4 m. From the table of the equivalent diameter for 30x40 cm grille size one finds $D_{eq} = 0,39$ m and corresponding diagrams on page T5. From Diagram T5.1 and for $D_{eq} = 0,39$ m, one finds that a throw of 14 m can be achieved using 1000 m³/h. From Diagram T5.2 the resulting noise level is $\Theta = 23$ dBA, while the pressure drop $\Delta P = 5$ Pa. In order for the space cover to be efficient at 2 m from the duct, a maximum inclination angle of the vertical blades should be set to 45° . In order to correct the throw estimated for a 0° inclination one has to use Diagram T10.4. From this and for $A_{min} = 0,3$ m and a throw of 14 m, one finds the throw of the 45° inclination to be $B = 6$ m. From Diagram T10.1 the resulting pressure drop is found to be $\Delta P = 7$ Pa, while from Diagram T10.2 the resulting noise level is $\Theta = 33,5$ dBA.

If the above air duct is mounted 3,4 m from the floor and grilles are to be used for cooling purposes what should be the temperature difference ΔT , so that the jet will enter the occupied zone by the customers at a horizontal distance 8 m from the duct?

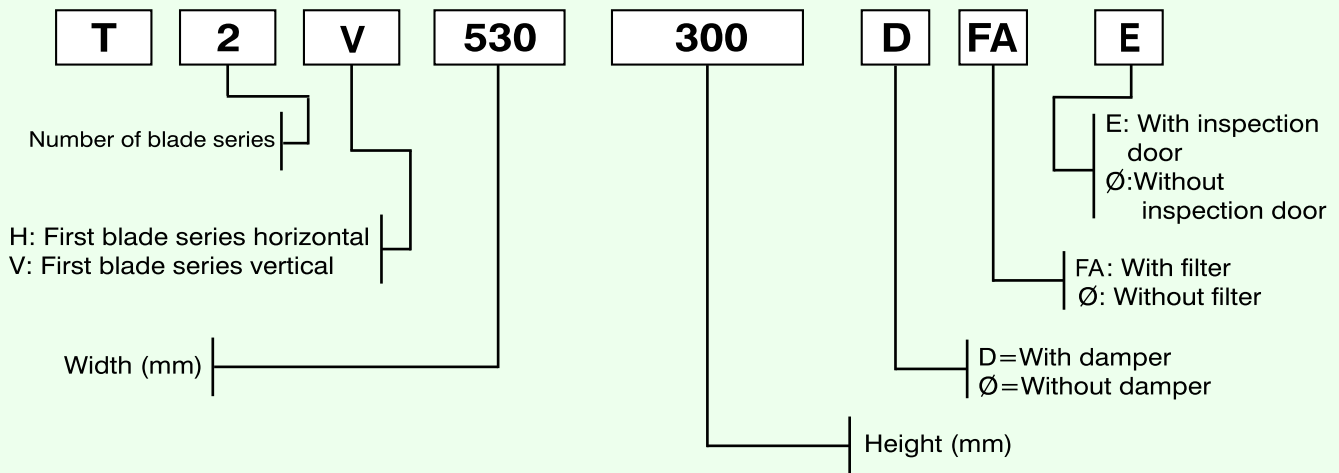
The occupied zone is set at 1,8 m from the floor. Thus, at 6 m horizontal distance the jet drop should be equal to 3,4 - 1,8 = 1,6 m. From Diagram T5.3 and for $D_{eq} = 0,39$ m and $Q = 1000$ m³/h moving vertically to Diagram T5.4 and from Diagram T5.5 for $y = 1,7$ m and $x = 8$ moving horizontally to Diagram T5.4, one finds $\Delta T = 10$ °C.



Due to continuous development of its products, AERGRAMMI reserves the right of modifications without prior notice.

ORDERING INSTRUCTIONS

A series of numbers and letters is used in the ordering procedure. The characteristics of the air grille are defined according to the following code:



Order example

Air grille type T2H, dimensions 530X300 mm, equipped with damper, air filter and inspection door :
T2H 530X300 D F E

Technical description

Manufactured by anodized aluminum profile wall or ceiling mounted grilles with adjustable blades, adequate for providing air jet directly into the ventilated space Could be optionally accompanied with flow regulating dampers and air filters. They may be equipped with an inspection door Their operational characteristics should be :

SUPPLY AIR

- Air supply : [m³/h]
- Pressure drop (total) : [Pa]
- Air throw : [m]
- Temperature difference : [°C]
- Noise level : [dBA]

RETURN AIR

- Air supply : [m³/h]
- Pressure drop (total) : [Pa]
- Noise level : [dBA]