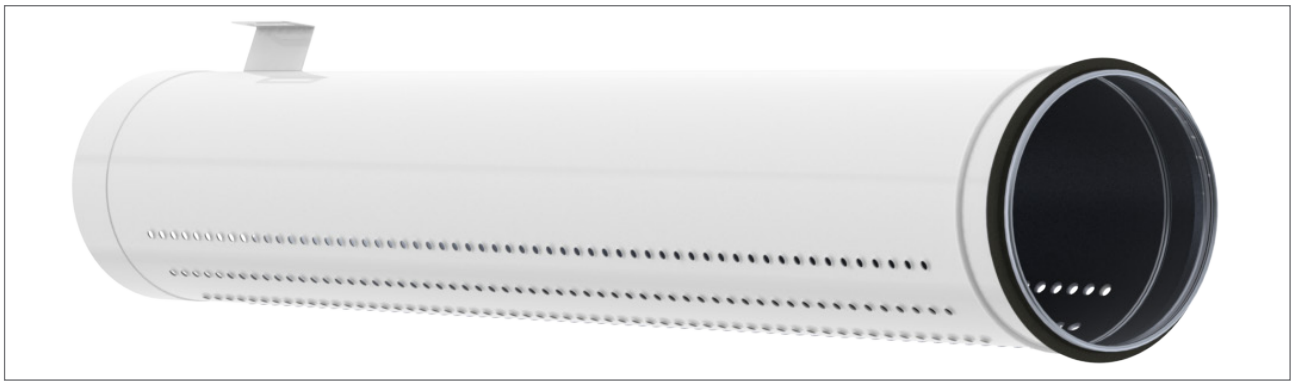
DSP Jet pipe



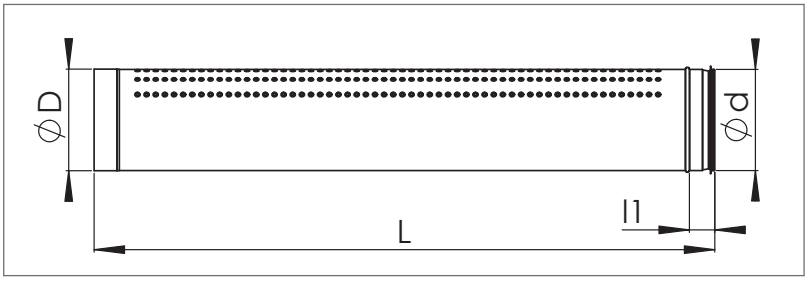
Ceiling-installed air distribution system.

Features:

- suitable for schools, offices, meeting halls, sports halls and warehouses
- especially designed for cooling
- large induction rate
- easy to install, measure, regulate and maintenance

Structure and dimensions

Nomi-nal-size	l_1	L	Weight, kg
160	29	1245	3,5
200	29	1245	4,5
250	50	1245	5,5
315	50	1245	6,9
400	50	1245	8,7
500	65	1245	11



Standard material galvanized steel. The duct is patterned with a certain quantity of nozzles. One end with rubber gasket and the other end fits a duct. Other materials and finishes available. Extra ducts (DSPO, L = 1250) and parts available.

Principle

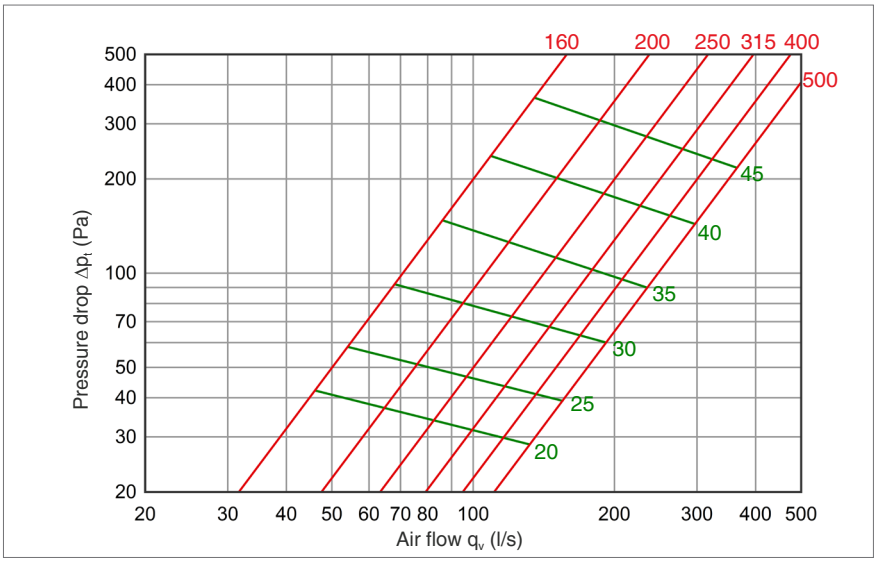
Designed for optimal cooling effect. Nozzles optimized for dynamic induction and provide effective distribution with low noise level. Each nozzle “takes in” a seven-fold quantity of room air, blending the supply air evenly and makes it possible to supply a large quantity of cooled air without draft to the occupied zone.

As seen on the diagram next page, the nozzles on the duct conform into various patterns (60°-360°).

Air flow depends on diameter. The proper function of the system requires controlled air flow speed. Air flow speed should not exceed 4 m/s.

	Upward 120°	Downward 120°	Horizontal 2x60°	Circular 360°
Min distance between nozzle pipes (m)	1,5	1,5	2,5	1,5
Installation height (m)	2,2-4,5	3-8	2,5-5	2,2-4,5
Ceiling distance from the duct (mm)	220	50	120	200
Supply air temperature, Δt (°C)	0-15	3-8	0-12	0-12

Technical data



System design

Dimensioning

The figure shows maximum air quantities for different sizes of ventiducts. Air quantity and pressure loss are freely selectable until 120 Pa. Figure on the next page shows noise level. If required air volume and pressure loss are defined in the order, the air volume will be preadjusted. If only air volume is defined the product will be supplied with a pressure loss of 60 Pa. Air quantity can be easily adjusted on site by closing or opening nozzles. Air quantity can be calculated as follows:

$q_v = \sqrt{\Delta p}$ x 0,030 x quantity

q_v = required air volume, dm^3/s
$\sqrt{\Delta p}$ = chosen/measured pressure loss, Pa
0,030 = k-value
Qty = number of open nozzles

Product codes

DSP	Ød	2x60	1	H	l/s
Product	Diameter	Supply air pattern	Direction 1- upward 2- horizontal 3- downward	Material or color	Air quantity (l/s)

Example: DSP 200- 2x60-2-H

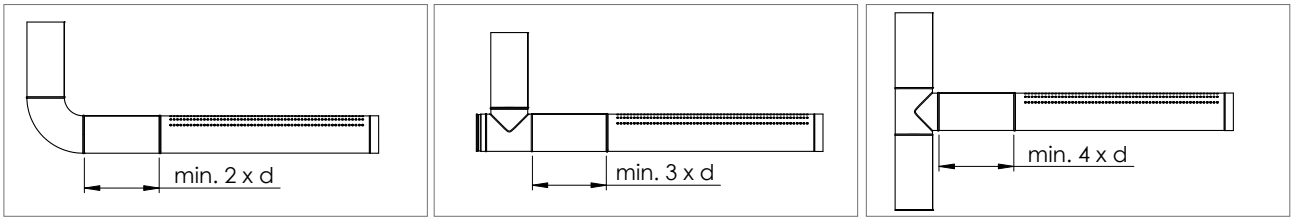
Accessories:
DSPO Lengthening duct
DSPM Measuring cap

Non-standard materials:
ZM – zinc-magnesium coated steel
H – acid-proof steel

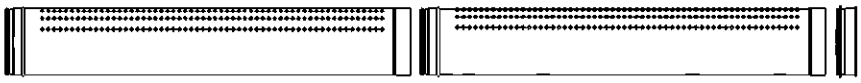
Colour code: RAL colours

Installation

Ventiduct should not be installed too close to bends, tees other elements that may create turbulence and hence noise. Straight duct sections should be installed between ventiduct and potentially disruptive components, as shown in the illustration below. Air quantity is preadjusted and no extra dampers are needed.

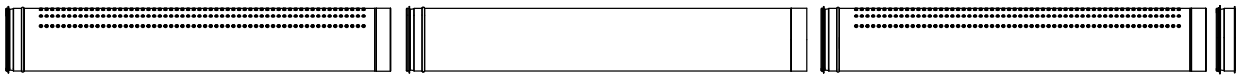


Lengthening of duct



DSP DSPM

DSPO lengthening duct between two jet pipes



DSP DSPO DSPM