DSP Jet duct

AUTODESK REVIT MagiCAD

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

Quick selection

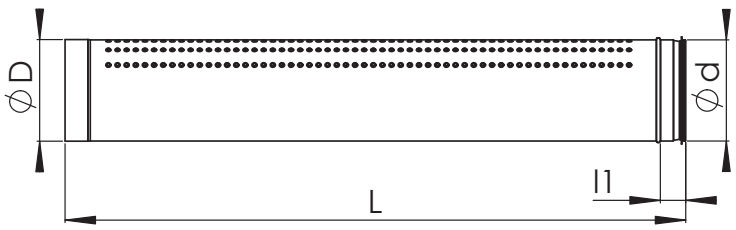
DSP	20 dB		25 dB		30 dB	
	l/s	Pa	l/s	Pa	l/s	Pa
DSP 160-1250	46	43	54	58	68	92
DSP 200-1250	64	37	76	52	95	80
DSP 250-1250	83	34	97	47	122	73
DSP 315-1250	98	32	124	43	150	67
DSP 400-1250	125	30	147	41	175	64
DSP 500-1250	145	28	165	39	194	60

Structure and dimensions

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.

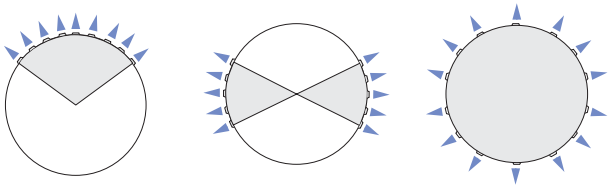
Nominal-size	l_1	L	Weight (kg)
160	29	600	
160	29	1250	3,5
200	29	600	
200	29	1250	4,5
250	50	600	
250	50	1250	5,5
315	50	600	
315	50	1250	6,9
400	50	600	
400	50	1250	8,7
500	65	600	
500	65	1250	11



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°).
Airflow depends on diameter.



120° 2x60° 360°
Supply air sectors

Upward airflow (120°)

The most common application. With an upward airflow, the mixing of the cooler supply air with the warm room air occurs already near the supply air duct. This allows to provide the room with supply air up to 15°C cooler than the room air.

Downward airflow (120°)

Downward air distribution is optimal for warm supply air or in high rooms where air distribution directed at workstations is desired. Difference between supply air and room air +3°C to -8°C.

Horizontal airflow (2x60°)

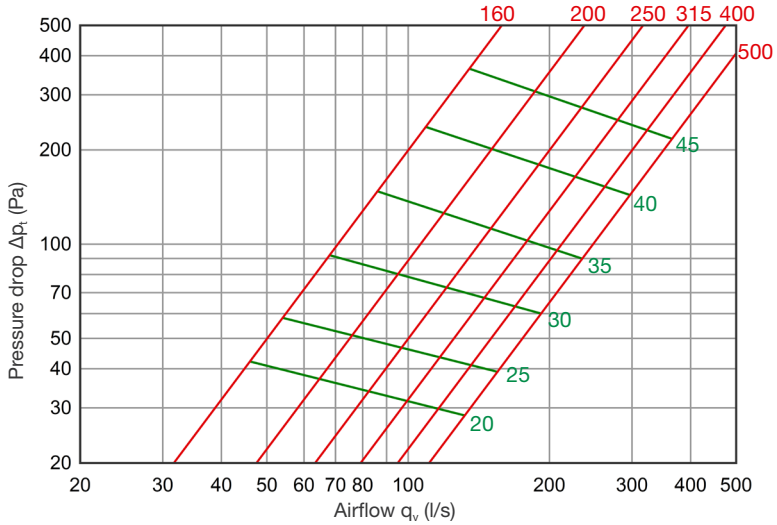
Suitable for lower ceiling heights. This type of air distribution provides a longer air stream and the nozzle pipes are placed at longer intervals. Difference between supply air and room air 0°C to -12°C.

360° airflow

This application is used for large and stable air quantities. Difference between supply air and room air 0°C to -12°C.

	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

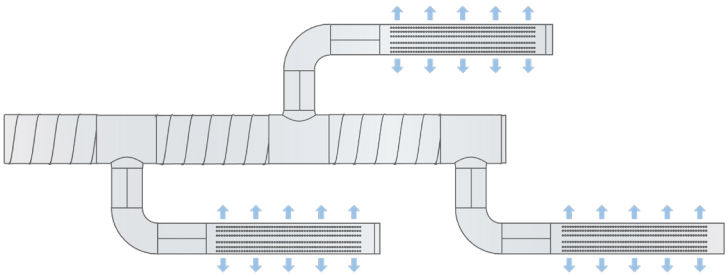


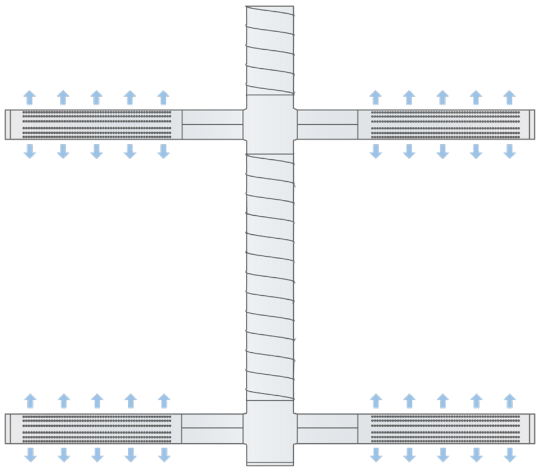
System design

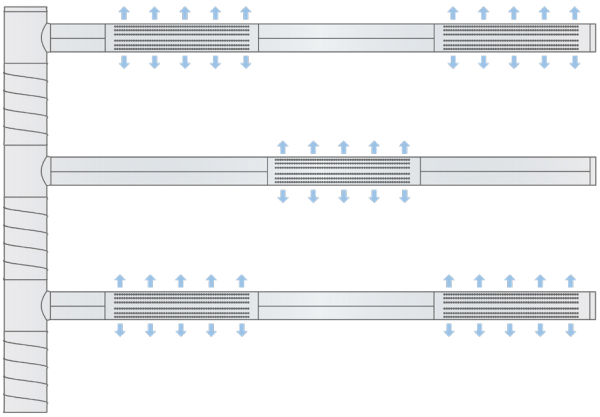
The size of the DSP Jet duct is selected according to the airflow.

In order to achieve efficient operation of the nozzle, the pressure distance should not be less than 20 Pa, which ensures a fair distribution of air in the room.

DSP installation examples

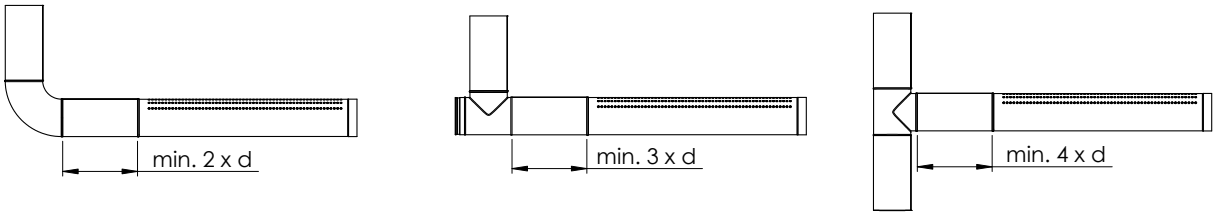




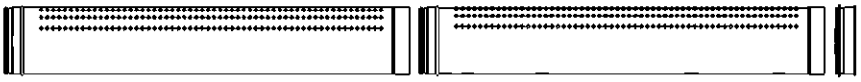


Installation

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

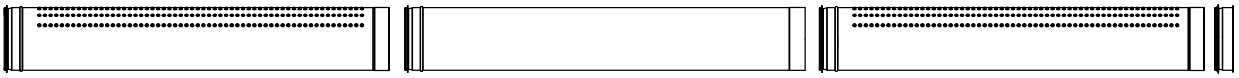


Lengthening of duct



DSP DSPM

DSPO lengthening duct between two jet pipes



DSP DSPO DSPM

Product codes

DSP - H - d - 120 - 1 - l/s - RAL

Product

Material
(-)
Zn – zinc-magnesium coated steel
H – acid-proof steel

Diameter d

Supply air pattern
120, 2x60, 360

Direction
1 - upward
2 - horizontal
3 - downward

Air quantity (l/s)

RAL colours