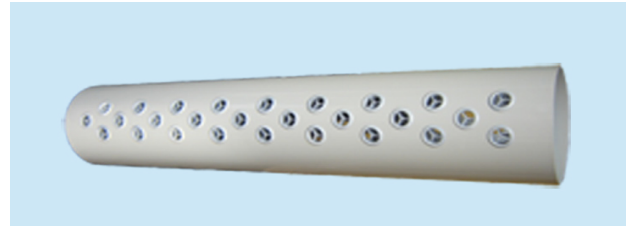


**Nozzle duct**

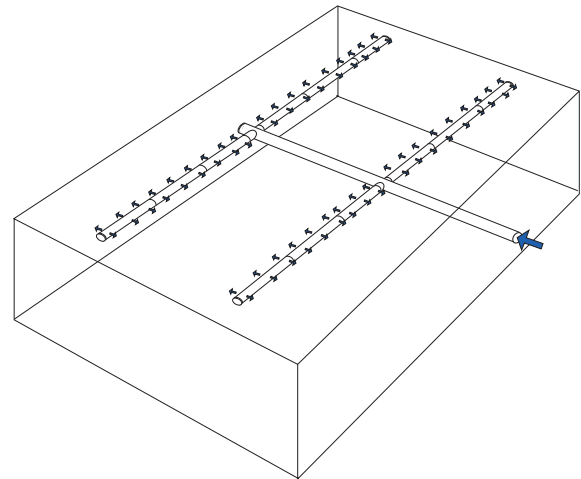
- **Effective and even ventilation**
- **Combined ducting and air supply**
- **Low pressure drop**
- **Simple installation**



The nozzle duct NDC is an air supply system . Nozzle duct systems are used in small rooms as well as large rooms to provide cooling and ventilation. Common applications are offices, schools, department stores and laboratories. The small nozzles distribute the air evenly upwards. Short air throws are achieved through induction of room air in the large number of nozzles. NDC is suitable for cooling with max undertemperature of 6K. The length of each duct varies with air flow, size etc. but can be up to 25m. Max inlet velocity in the duct is 4 m/s.

**Design**

The nozzle duct consists of a straight seamed duct with plastic nozzles. Available sizes are diameters 160,200,250,315, and 400 . The length of each duct is 1m, 1.5m and 2m. The system includes accessories, straight seamed duct, sleeve, reducer, T-piece and assembly fittings. The nozzles are mounted in rows with a fixed distance. The number of rows depend on air flow in the duct and the size of the duct.

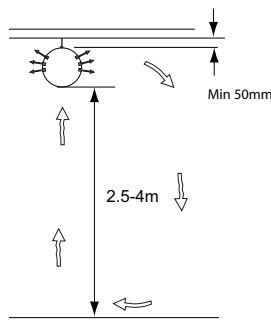


*Larger room with main duct in the middle and nozzle ducts with 2 way air spread extended from both sides .*

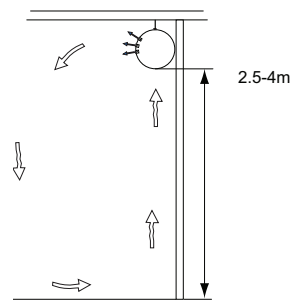
**Versions**

*Not painted* made in galvanized sheet steel with grey plastic nozzles (PP). The surface is raw with some scratches from the manufacturing .

*Painted* as standard in RAL 9010 powder paint with white nozzles. Other colours on request.



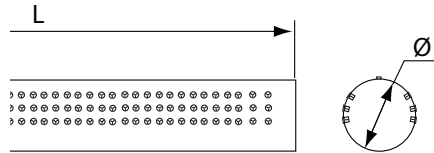
*Nozzle duct with 2 way air spread, 2x3 nozzle rows. Recommended installation heights with air supply upwards is 2.5-4m.*



*Nozzle duct with 1 way air spread, 3 nozzle rows. Recommended installation heights with air supply upwards is 2.5-4m.*

**Dimensions and weights**

The required nozzle duct length is achieved by using below standard sizes and standard lengths.

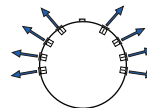


Size NDC	Ø (mm)	L (mm)	Weight (kg)
016	160	990	4
016	160	1490	6
016	160	1990	8
020	200	990	5
020	200	1490	7
020	200	1990	10
025	250	990	6
025	250	1490	9
025	250	1990	12
031	315	990	8
031	315	1490	12
031	315	1990	16
040	400	990	10
040	400	1490	15
040	400	1990	20

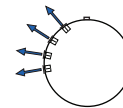
**Nozzle pattern**

The nozzle duct is available with 2- ways air supply and 1 way air supply. The max. number of nozzle rows depends on the duct diameter see table

NDC Size	Max number of nozzle rows each side
160	3
200	4
250	6
315	7
400	9



*2 way air supply  
2x4 nozzle rows*



*1 way air supply  
4 nozzle rows*

**Quick selection**

There are many possible combinations of duct lengths and number of nozzle rows. Below tables are just a few of these. If they do not fitt contact us to make a selection. Air flows in the tables provide comfort in the occupied zone (1.7m above floor level) with air movements <0.2m/s. The installation height is 2.8m and  $\Delta t=3K$ . For other values contact us to make a selection)

**Technical Data**

LwA sound power level dB(A)

$\Delta p_t$  total pressure drop Pa

Duct length 2m

Ø	Total number of nozzle rows									
	4		6		8		10		12	
mm	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa
160		37/15		-		-		-		-
200		32/10		39/15		-		-		-
250	80	32/8	120	36/10	160	39/13	200	43/16		-
315		32/7		35/8		38/9		39/10	240	40/12
400		32/6		35/7		38/7		39/8		39/8

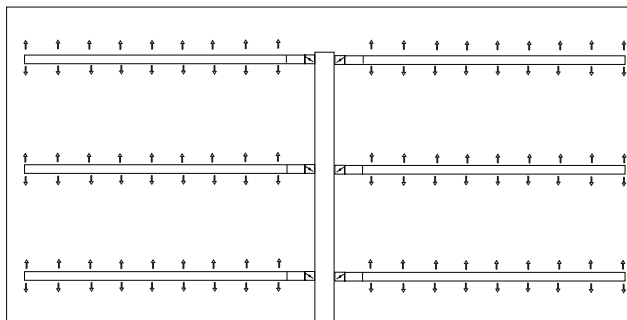
Duct length 4m

Total number of nozzle rows										
∅	4		6		8		10		12	
mm	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa		dB(A)/Pa
250		39/13		-		-				-
315	160	38/9	240	40/12	320	44/17				-
400		38/7		39/8		41/10	400	42/13	480	43/16

Duct length 6m

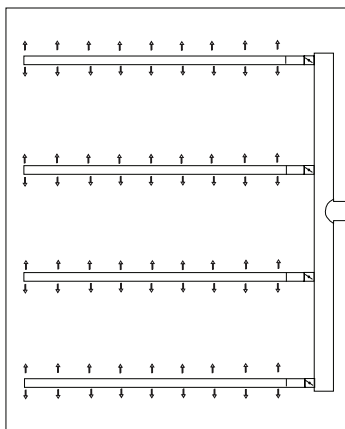
Total number of nozzle rows												
∅	2		4		6		8		10		12	
mm	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa	l/s	dB(A)/Pa
200		34/10		-		-		-		-		-
250	100	33/7	200	41/15		-		-		-		-
315		32/5		37/8	300	41/14		-		-		-
400		32/5		36/6		38/8	400	40/10	500	44/14	500	41/12

Lay out



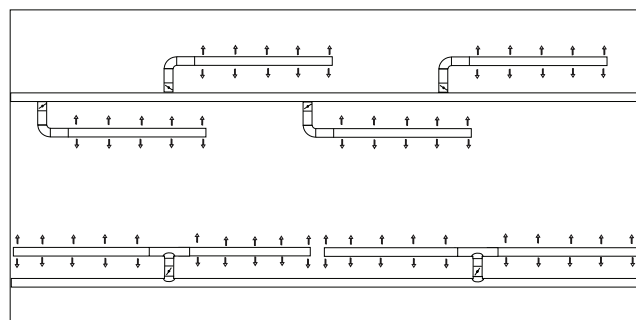
**Fishbone model**

Nozzle ducts on each side of a supply duc. Dampers are installed to balance the system



**Fork model**

Nozzle ducts on one side of a supply duc. Dampers are installed to balance the system

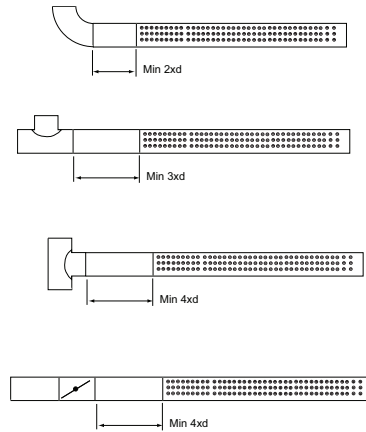


**Line model**

Suitable for long and narrow premises. Dampers are installed to balance the system

**Installation**

In order to avoid turbulence after bends, T-pieces or dampers a straight duct section is installed between the nozzle duct and component.



**Mounting**

The nozzle ducts are suspended from the ceiling. It is done by using an assembly bracket around the duct or by drilling a hole in the duct and a threaded rod.

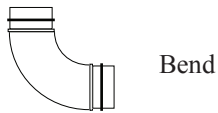


Assembly bracket and suspension with threaded rod.



Alt. Drilled hole in the nozzle duct and threaded rod

**Accessories**



Bend



Sleeve



End cap



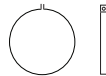
Damper



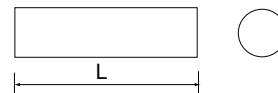
Z- Bracket

Threaded rod M8

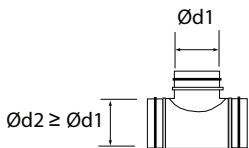
Rod fitting M8



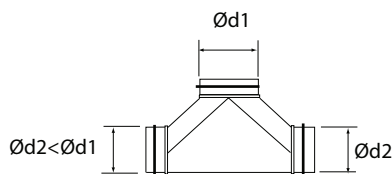
Duct bracket



Blind piece, straight seamed duct without



T-Piece



T-Piece special

## Specification

Nozzle duct type NDC to be suspended from the ceiling. Consisting of a straight seamed duct made from galvanized sheet steel with plastic nozzles for even air distribution.

Powder painted in RAL9010 with whitw nozzles.

Alt. Not painted with grey nozzles.

Ø=.....m Total length=.....m

Total number of nozzle rows ..... pcs Air spread..... directions

## Product code

NDC-aaa-bbb-cc-d-e

