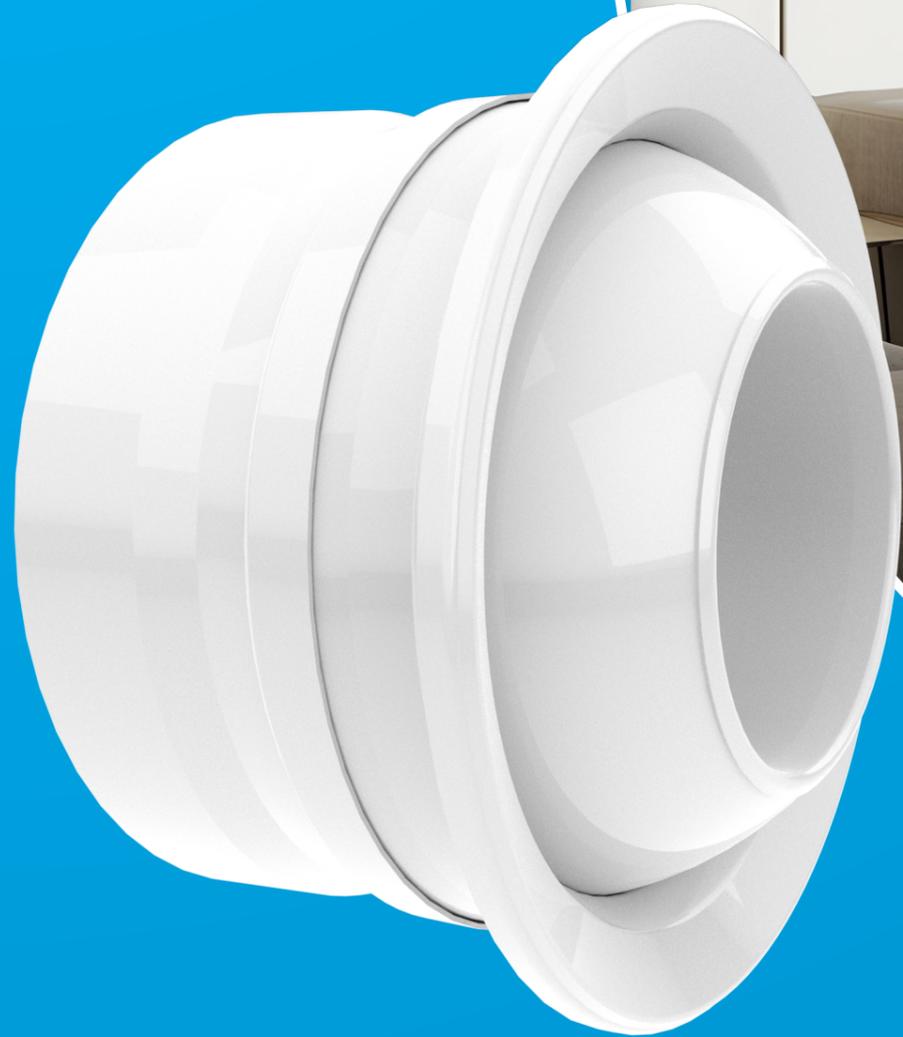


ONH

Jet Nozzle Type-2



FEATURES

- ONH Jet Nozzle enables supply air to be delivered over long throw distances.
- It is effectively used in large spaces such as production areas, sports halls, airports, train stations, shopping malls, and conference halls.
- With its aesthetic design, it is favored in architectural applications. It is easy to install and maintains its decorative appearance.
- Its optimized nozzle geometry provides long throw distances at low sound pressure levels.
- The adjustable body allows the airflow to be directed as desired within a 30° range, ensuring effective throw patterns over long distances.
- It supplies air to the space with a temperature difference ranging from -12 K to +20 K, depending on the application.
- The nozzle direction can be controlled manually or via an optional actuator.

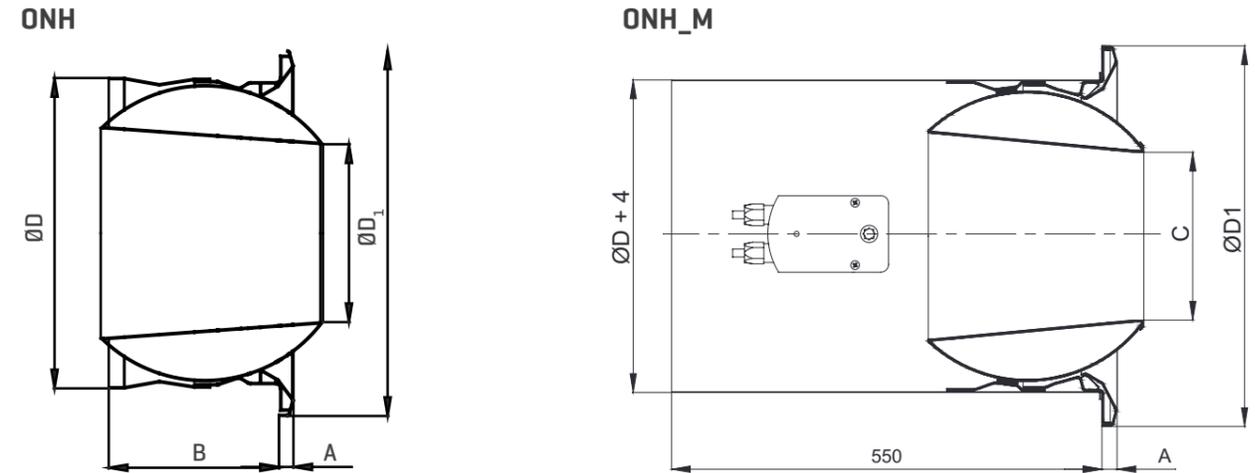
MATERIAL

- It is manufactured from 1.5 mm aluminum 1050 material.

SURFACE COATING

- Standard RAL 9010 or RAL 9016 electrostatic powder coating
- Optional
 - Other RAL color codes
 - Uncoated [raw] finish

STANDARD DIMENSIONS



ONH	$\varnothing D$	$\varnothing D_1$	A	B	C
250	248	304	15	134	136
315	313	368	17	185	166
400	398	464	22	229	226

Table 1: Standard Dimesions

PERFORMANCE DATA

Selection Size [mm]	Effective Area [m²]	Airflow [m³/h]	Effective Velocity [m³/h]	Pressure Drop [Pa]	Throw Distance [x] [m]			Sound Power Level [dB]	Rise or Drop Depending on Angle [α] [m]			Rise or Drop Depending on Temperature Difference (ΔT) [m]				
					0,25 m/s	0,5 m/s	1 m/s		10°C	20°C	30°C	2K	4K	6K	8K	10K
250	0,0135	100	2	2	7	4	2	<15	1	2	4	4	9	13	18	22
		150	3	5	11	5	3	<15	2	4	5	7	13	20	27	33
		200	4	9	14	7	4	<15	2	5	7	9	18	27	35	44
		250	5	14	18	9	4	<15	3	6	9	11	22	33	44	55
		300	6	20	21	11	5	<15	4	7	11	13	27	40	53	66
		350	7	27	25	12	6	<15	4	8	12	16	31	47	62	78
		400	8	36	28	14	7	<15	5	10	14	18	35	53	71	89
		450	9	45	32	16	8	<15	6	11	16	20	40	60	80	100
		500	10	55	35	18	9	16	6	12	18	22	44	66	89	111
		550	11	67	39	19	10	20	7	13	19	24	49	73	98	122
600	12	79	42	21	11	23	7	15	21	27	53	80	106	133		
315	0,0225	100	1	1	5	3	1	<15	1	2	3	3	5	8	11	14
		190	2	3	10	5	3	<15	2	4	5	5	10	16	21	26
		280	3	7	15	8	4	<15	3	5	8	8	15	23	31	38
		370	5	11	20	10	5	<15	3	7	10	10	20	30	41	51
		460	6	17	25	12	6	<15	4	9	12	13	25	38	50	63
		550	7	24	30	15	7	<15	5	10	15	15	30	45	60	75
		640	8	33	35	17	9	<15	6	12	17	18	35	53	70	88
		730	9	43	40	20	10	<15	7	14	20	20	40	60	80	100
		820	10	54	45	22	11	15	8	15	22	23	45	68	90	113
		910	11	66	49	25	12	19	9	17	25	25	50	75	100	125
1000	12	79	54	27	14	23	9	19	27	27	55	82	110	137		
400	0,0385	100	1	<1	4	2	1	23	1	1	2	2	4	5	7	9
		260	2	2	11	6	3	<15	2	4	6	5	9	14	18	23
		420	3	5	18	9	4	<15	3	6	9	7	15	22	30	37
		580	4	9	25	12	6	<15	4	8	12	10	21	31	41	66
		740	5	15	31	16	8	<15	5	11	16	13	26	39	53	80
		900	6	22	38	19	10	<15	7	13	19	16	32	48	64	94
		1060	8	31	45	22	11	<15	8	15	22	19	38	56	75	108
		1220	9	41	52	26	13	<15	9	18	26	22	43	65	87	122
		1380	10	52	59	29	15	<15	10	20	29	24	49	73	98	137
1540	11	64	65	33	16	19	11	22	33	27	55	82	109	137		
1700	12	78	72	36	18	23	13	25	36	30	60	91	121	151		

Table 2: Supply Data Table

AIR CONDITIONING MODES

Heating Mode

Cooling Mode

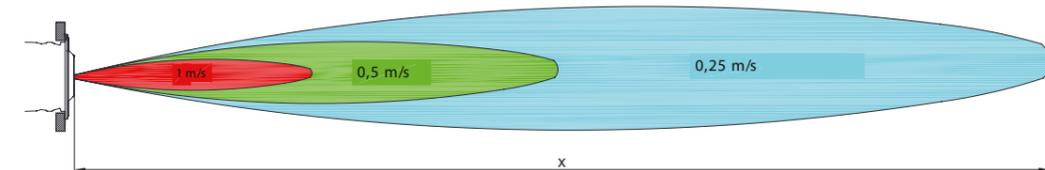
Isothermal Mode



Throw Distance Illustration

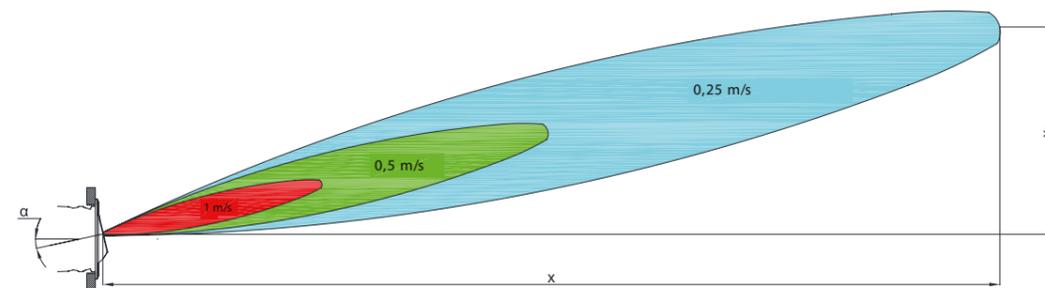
Isothermal Straight Throw

In isothermal throw conditions, there is no temperature difference between the supply air and the room air. The Jet Nozzle remains in the straight (neutral) position.



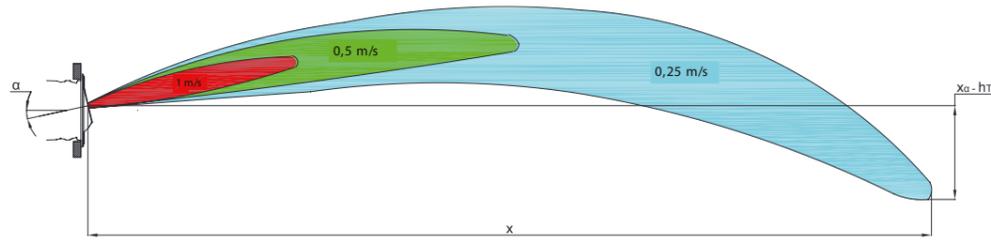
Isothermal Angled Throw

In isothermal throw conditions, there is no temperature difference between the supply air and the room air. The Jet Nozzle is positioned at an angle.



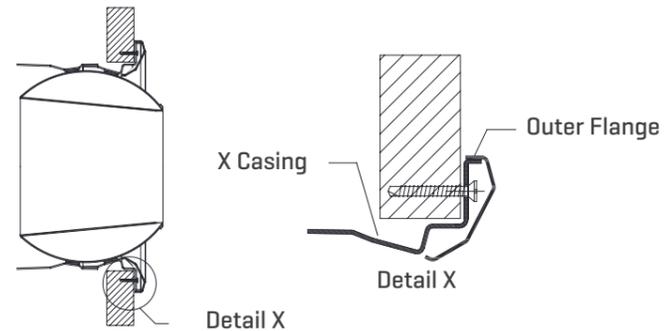
Cooling/Heating Mode and Angled Throw

In cooling mode, the room temperature is higher than the supply air temperature. Therefore, the supply air tends to descend downward. The Jet Nozzle is positioned at an angle.



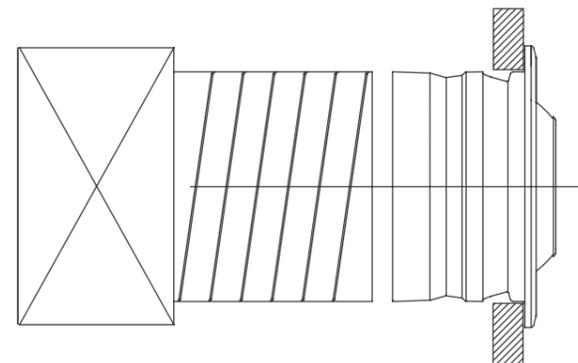
INSTALLATION

Screw-Mounted Installation



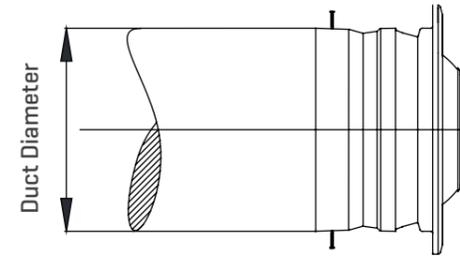
When the unit is to be mounted onto a plasterboard ceiling, the outer flange is rotated counterclockwise and removed. The casing is then screwed onto the plasterboard surface. Once the screwing process is completed, the outer flange is reattached. In this way, the mounting screws remain concealed.

Installation on Flexible Duct



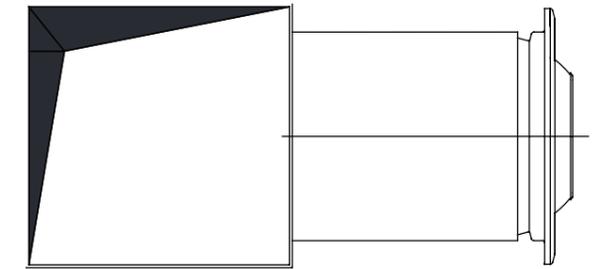
Installation on flexible ducts is carried out by inserting the nozzle connection into the duct.

Installation on Circular Duct



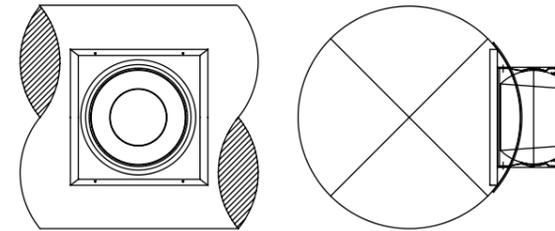
Installation on circular ducts is carried out by inserting the nozzle connection into the duct.

Installation on Rectangular Duct



An opening must be created on the rectangular duct. Installation is then carried out by inserting the nozzle connection into the prepared opening.

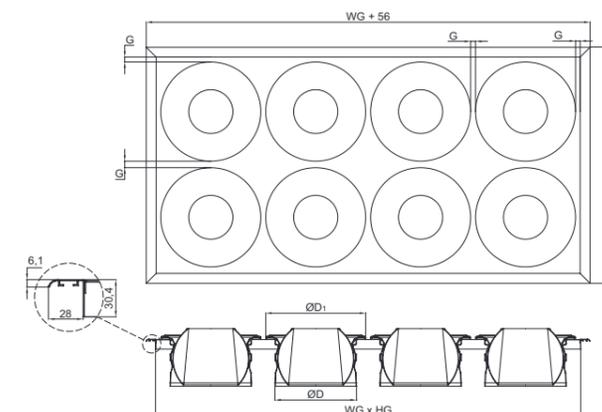
Optional Duct Installation



For side installation on circular ducts, it is used together with the CRC Adapter.

ONG - GROUP NOZZLE

To meet the required airflow conditions, the number of nozzles must be increased. In such cases, the ONG Group Nozzle is used to distribute equal airflow to each nozzle.



The calculation method for determining the throat dimensions of the group nozzle installation is provided below.

$$WG \text{ (mm)} = NW \times (\varnothing D1 + G) + G$$

$$HG \text{ (mm)} = NH \times (\varnothing D1 + G) + G$$

Accordingly:

NW is the number of nozzles horizontally,

NH is the number of nozzles vertically.

In the example above, NW = 4 and NH = 2.

$\varnothing D1$: The diameter measured at the nozzle inlet, including its casing.

G: The spacing left between the nozzle casings.

Group nozzle layouts can be arranged in the desired quantity and dimensions, provided that the spacing G is at least 15 mm.

In the example above, if the nozzle size is $\varnothing 250$, then $\varnothing D1 = 304$ mm.

Taking G = 15 mm, the throat dimensions are calculated as follows:

$$WG = 4 \times (304 + 15) + 15 = 1291 \text{ mm}$$

$$HG = 2 \times (304 + 15) + 15 = 643 \text{ mm}$$

If required, the resulting dimensions may be rounded, provided that the rounding does not exceed 5 mm.

After rounding, the throat dimensions for a 4x2 arrangement, containing 8 ONH nozzles of $\varnothing 250$, are:

$$WG \text{ (Width)} = 1290 \text{ mm}$$

$$HG \text{ (Height)} = 640 \text{ mm}$$

PRODUCT SELECTION

Example:

The required air volume for the Jet Nozzle supplying the space is 1850 m³/h. The jet is requested to provide a horizontal throw of 20 meters with a vertical drop of 10 meters, while keeping the pressure drop below 50 Pa. The room temperature difference is -4 K, and the system operates in cooling mode. Perform the product selection.

Solution:

First, the nozzle size that will provide the most suitable throw distance while keeping the pressure drop below 50 Pa is selected.

After that, group nozzle configurations capable of delivering the required airflow are evaluated.

From the supply data table (Table 2), the required nozzle angle and drop values are selected.

Accordingly, when an air volume of 370 m³/h is supplied through a $\varnothing 315$ jet nozzle, a horizontal throw of 20 meters and a vertical drop of 10 meters are achieved. The corresponding pressure drop is 11 Pa.

To achieve a total airflow of 1850 m³/h:

$$\text{Number of Jet Nozzles: Round down } (2000\text{m}^3/\text{h}) / (370\text{m}^3/\text{h}) = 5(2000\text{m}^3/\text{h}) / (370\text{m}^3/\text{h}) = 5$$

Since the number of nozzles is greater than one, a group nozzle must be selected.

The group nozzle selection is carried out using the "ONG - GROUP NOZZLE" section.

PRODUCT ORDER CODE

Product Coding for Standard Product

ONH.ALM. < A > . < B >

A	Product Size [Ø] (mm)	
	25	ONH-Ø250
	31	ONH-Ø315
	40	ONH-Ø400
B	Coating	
	00	Uncoated
	S1	Standard Coating - RAL 9010
	S2	Standard Coating - RAL 9016
	XX	Custom Coating

Example Coding: ONH.ALM.MD.25.SS

Product Coding for Motorized Version

ONH_M.ALM. < A > . < B > . < C >

A	Product Size [ØD] [mm]	
	25	ONH-Ø250
	31	ONH-Ø315
	40	ONH-Ø400
B	Actuator	
	S59	LM24A-5Nm
	S66	LM230A-5Nm
C	Coating	
	00	Uncoated
	S1	Standard Coating - RAL 9010
	S2	Standard Coating - RAL 9016
	XX	Custom Coating

Example Coding: ONH_M.ALM.MD.25.S59.SS

Product Coding for ONG – Group Nozzle

ONG.ALM.05. < A > . < B > . < C > . < D > . < E > . < F > . < G >

A	Installation Type	
	KP	Bracket-Mounted
	KR	T-Bar Ceiling [Grid Ceiling] Installation
	VD	Screw-Mounted
B	WG [Width] [mm]	
	0000	Standard Dimensions
C	HG [Height] [mm]	
	0000	Standard Dimensions
D	Nozzle	
	25	ONH-Ø250
	31	ONH-Ø315
	40	ONH-Ø400
E	Number of Nozzle	
	XX	XX
F	Number of Rows	
	1	Single Row
	2	Double Row
	3	Triple Row
	4	Four Rows
	5	Five Rows
G	Coating	
	00	Uncoated
	S1	Standard Coating - RAL 9010
	S2	Standard Coating - RAL 9016
	XX	Custom Coating

SUSTAINABILITY SOLUTIONS AT DOGU HVAC



We offer supplementary health insurance to our employees to promote healthy living. We also plan health-focused initiatives such as smoking cessation programs.



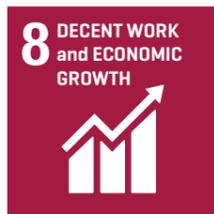
Through the DOGU HVAC CLUB project, we organize technical tours of our factory, participate in career events, and provide sponsorships to support the skill development of university and technical high school students.



In 2024, we increased female employment in our administrative and production departments. This step aims to contribute to gender equality by offering a workplace with equal rights for all employees.



Our R&D center's 2,500 m² solar panels and 0.6 MW annual capacity solar energy systems reduce our carbon footprint. We generate our electricity, ensuring a reliable, sustainable, and accessible clean energy source.



Decent Work and Economic Growth: As an employer brand, our primary goal is to protect our employees' rights and create a workplace founded on equality and justice for all employees.



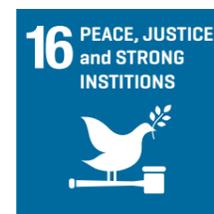
We enhance indoor air quality with environmentally friendly and energy-efficient products, ensuring adherence to European standards.



We minimize waste through lean production policies and emphasize recycling, simultaneously increasing efficiency in our production processes.



We support environmental protection through our eco-friendly, sustainable, energy-efficient product lines and R&D efforts focused on reducing waste that could contribute to climate change.



We value transparency and accountability, working with associations like ISKAV to prevent corruption and unfair competition, aligning with sectoral ethical values.



Venues Breathe With Us



Scan to watch our promotional video