

# JET NOZZLES

Rev.02  
26-05-2015

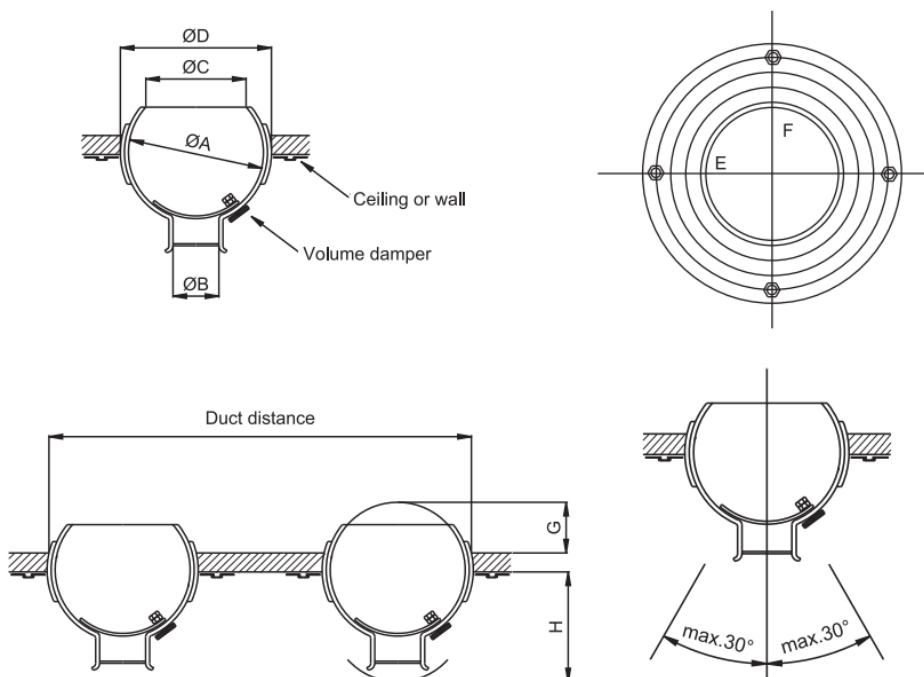


## GMC JN-025 PRODUCT SPECIFICATIONS:

- Adjustable chasis and special frame are made of aluminum material by coating.
- Provides a long throw (up to 25 meters) at high velocities. Usable for pointwise heating/cooling in wide and high-ceiling rooms.
- Has a flow rate of 2000m<sup>3</sup>/h (max), suitable for up to 8m. heights.
- Air thrower ball can be adjusted with 30° angle.
- Has two main types: Single Walled Jet Nozzle (JN-125) and Double Walled Jet Nozzle (JN-225).
- On request, can be manufactured as “Multi-Nozzle Assembly”(as 4-6-8-... nozzles).
- Assembles with round duct connector, direct duct connection or flexible duct connector, by flanges, screws or rivets.
- Eloxal, anodizing or electrostatic powder coating with the color from RAL catalogue.

## TECHNICAL DETAILS

### JN-125



HVAC Systems and Equipments Co.  
4640 Hedgcoxe Road 227 Plano, TX 75024 – US

[www.gmcair.com](http://www.gmcair.com)

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## JN-125, STANDARD DIMENSIONS (mm)

Standard size	øC	øB	øA	øD	øE	øF	øG
80	65	40	76	90	115	95	15
160	115	80	146	160	200	180	60
200	160	100	196	220	250	230	80
250	215	125	246	260	300	285	100
315	255	162	311	320	360	345	160
400	345	200	396	410	450	430	150

## JN-225, STANDARD DIMENSIONS (mm)

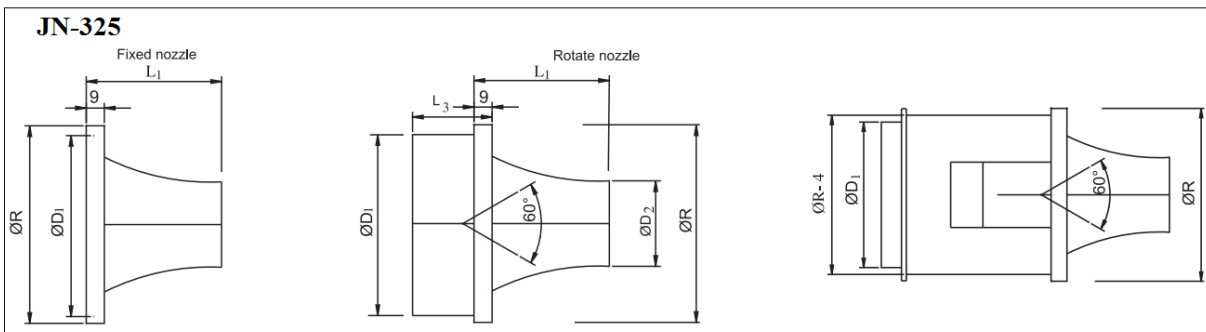
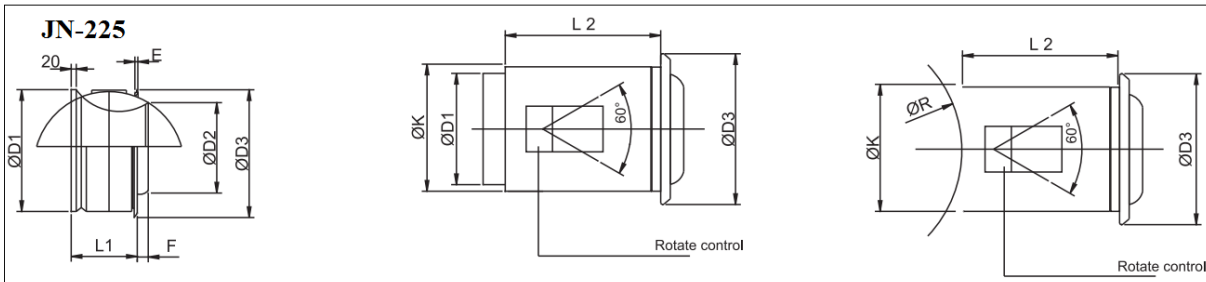
Standard size	øD1	øD2	øD3	øK	E	F	L1	L2
100	98	50	146	134	10	-2	78	80
125	123	64	169	157	10	4	89	90
160	158	82	200	188	11	10	106	110
200	198	108	257	242	16	14	127	140
250	248	136	302	287	16	23	159	170
315	313	174	384	358	23	29	189	220
400	398	230	467	441	24	47	223	260

Standard size	Suitable round duct diameter					
	200	250	315	500	630	800
100	*					
125		*				
160			*	*	*	*
200				*	*	*
250				*	*	*
315				*	*	*
400					*	*

## JN-325, STANDARD DIMENSIONS (mm)

Standard size	øD1	øD2	øD3	L1	L2	L3	R
160	158	82	201	122	105	102	225
200	198	108	241	153	115	112	265
250	248	136	291	187	115	112	315
315	313	174	376	254	145	142	400
400	398	230	461	287	145	142	485

Standard size	Suitable round duct diameter			
	315	500	630	800
160	*	*	*	*
200		*	*	*
250		*	*	*
315		*	*	*
400			*	*



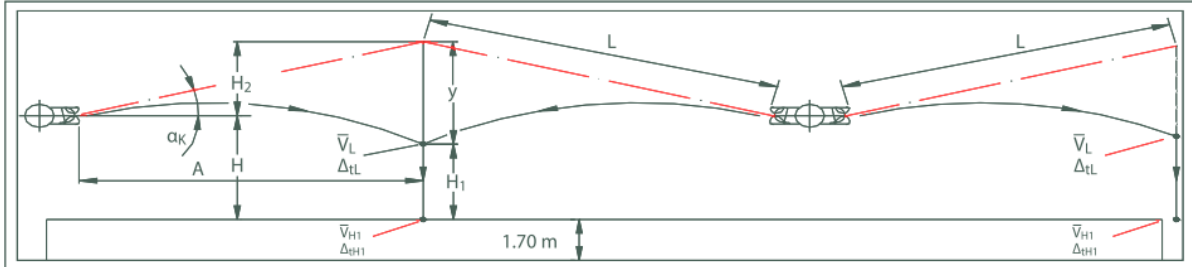
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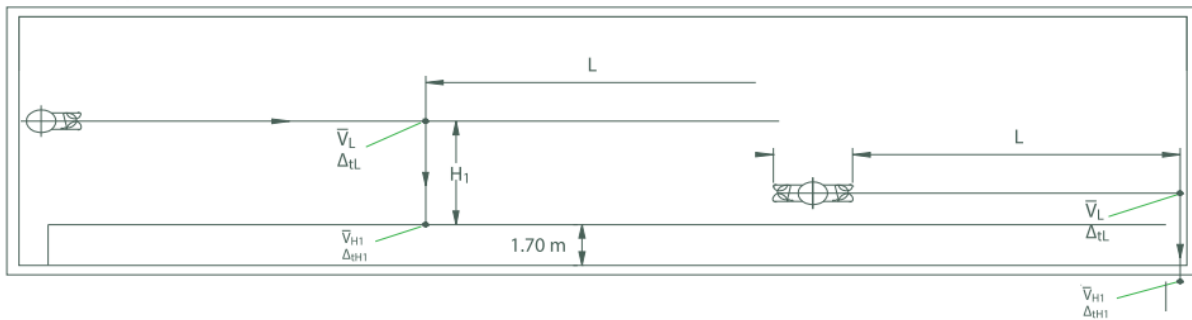


## DATA DIAGRAMS

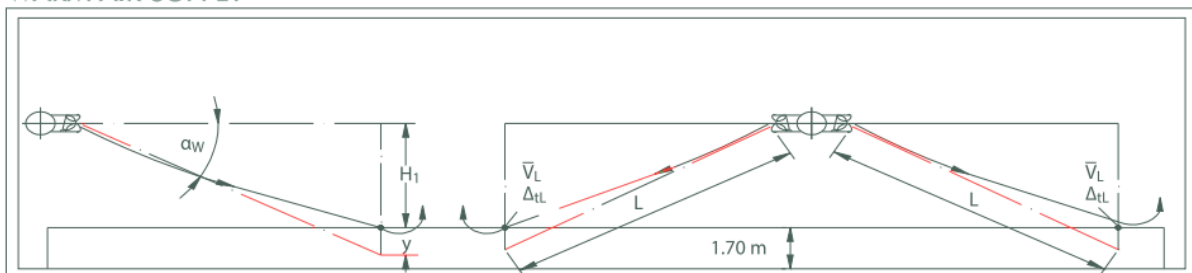
### COLD AIR SUPPLY



### ISOTHERMAL AIR SUPPLY



### WARM AIR SUPPLY



- $H_1$  [m] : Height of collision point of two air streams above occupied zone
- $H_2$  [m] : Height of collision point of two air streams above mounting position of nozzles, for isothermal conditions
- $L$  [m] : Length of air stream for isothermal conditions
- $L_{max}$  [m] : Max. Penetration depth of warm air stream directed vertically downwards
- $\alpha_k$  [°] : Discharge angle for cold air
- $\alpha_w$  [°] : Discharge angle for warm air
- $V$  [m<sup>3</sup>/h] : Air flow
- $y$  [m] : Air stream deflection due to temperature difference from isothermal conditions.
- $V_k$  [m/s] : Air velocity in duct
- $V_L$  [m/s] : Mean air stream velocity
- $V_{H1}$  [m/s] : The average air velocity at the entrance to the living area
- $\Delta_{tL}$  [K] : Temperature difference between centre of air stream at distance  $L$ , and room air.
- $\Delta_{tH1}$  [K] : Temperature difference between air in centre of stream when entering occupied zone and room air

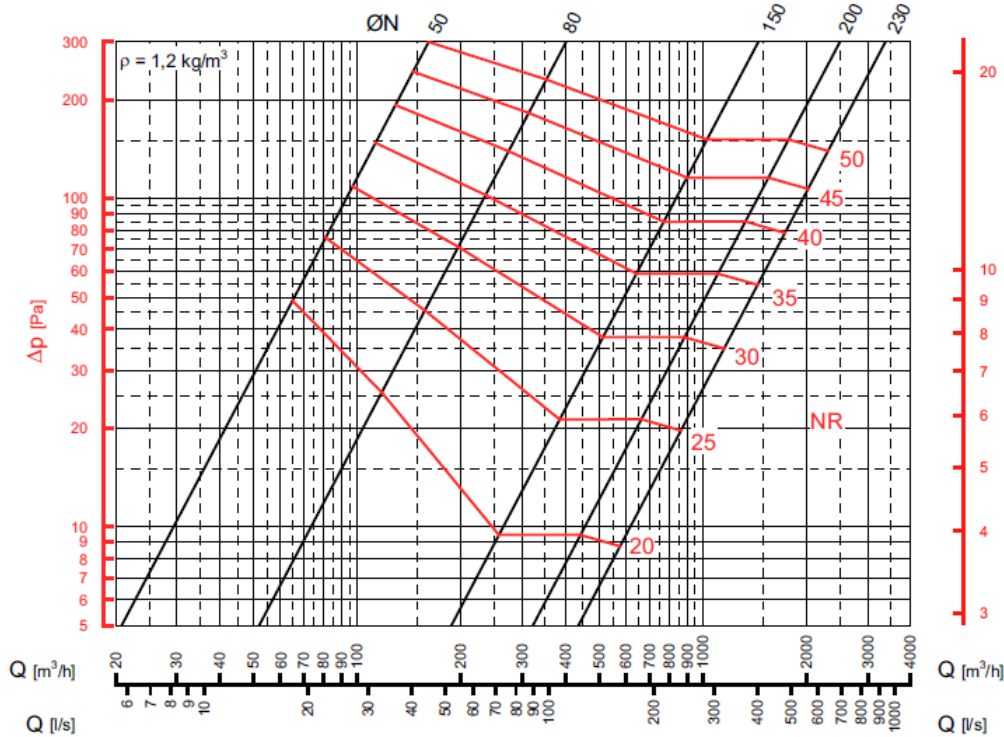


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## JN-025, PRESSURE DROP AND NOISE LEVELS



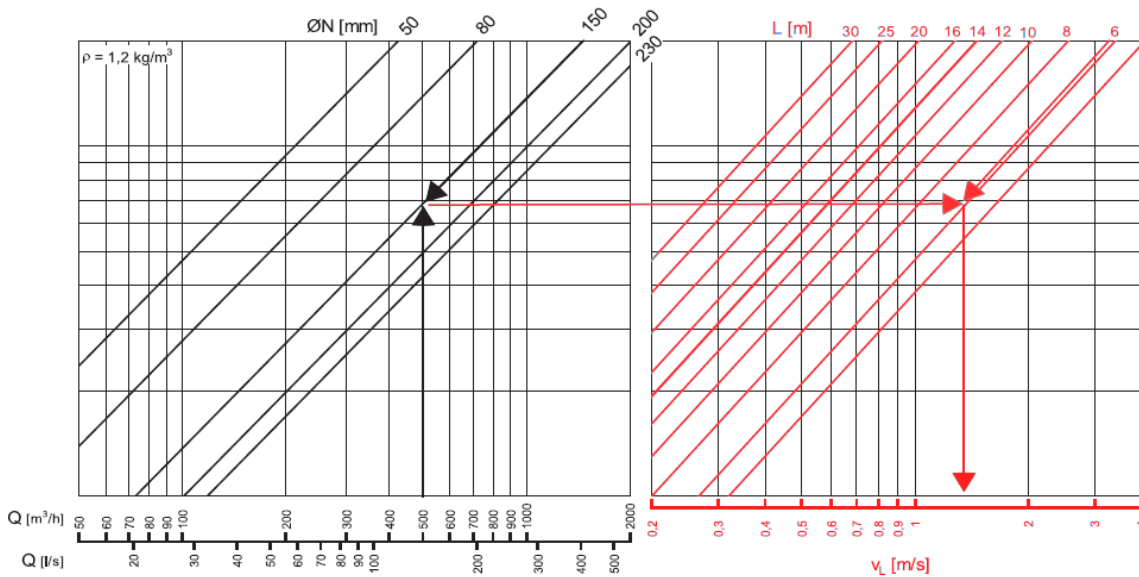
- Q [m³/h] [l/s]                    supply air flow rate
- ØN [mm]                        nozzle diameter
- v<sub>k</sub> [m/s]                        velocity relating to the effective outlet area S
- Δp [Pa]                         pressure loss
- NR                                noise rating (ISO standard, in relation to 10<sup>-12</sup> W) taking no account of the attenuation of the room

Correction of values Δp and NR with RR damper fully open Δp' = Δp x 1,5, NR = NR + 6.

Correction of values Δp and NR with RF equalizing net grid applied Δp' = Δp x 1,2, NR = NR + 3.

Pressure loss and noise level do not vary with the inclination of the nozzle

## JN-025, THROW DISTANCES (m)



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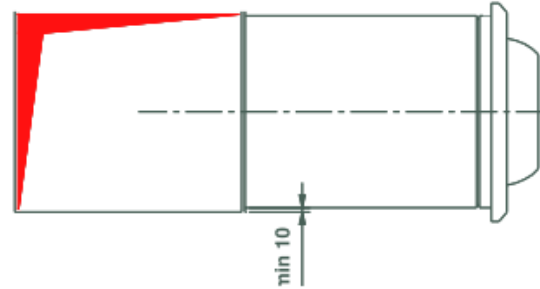
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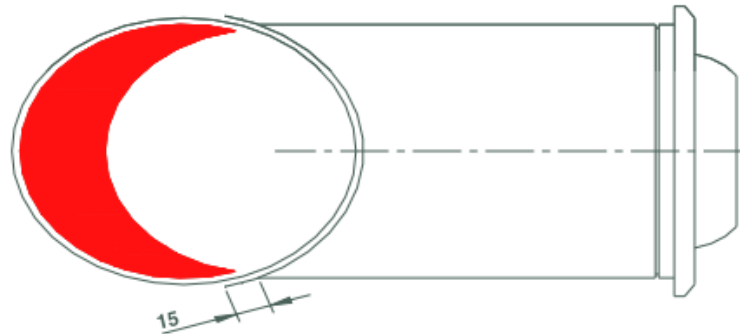
## MOUNTING DETAILS

Jet nozzles are suitable for mounting on rectangular or circular ducts. For both connection types, there is a circular drilled flange appropriate to be fixed with screws or rivets.

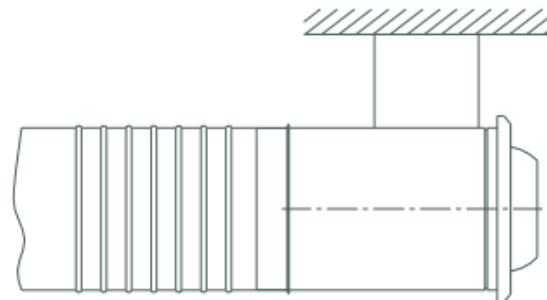
Rectangular duct connection example



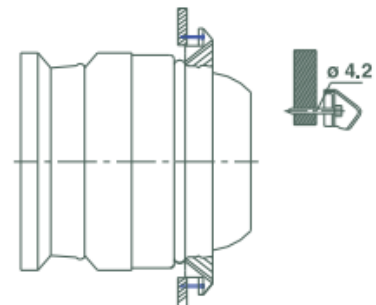
Round duct connection example



Flexible duct connection example



Wall installation example



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## ORDER PARAMETERS:

JN-025		OD9010	SM	40X90
<p>JN-125: Single Walled</p> <p>JN-225: Double Walled</p>				<p><b>Exhaust x Neck</b></p> <p><b>Diameters</b></p> <p>40X90</p> <p>80X160</p> <p>100X220</p> <p>125X260</p> <p>162X320</p>
<p>00: No coating</p> <p>EX: Eloxal Coating</p> <p>OD----: Oven Drying Coating</p>			<p>00: No Mounting</p> <p>SM: Screw Mounting</p>	

