

JND – Jet Nozzle Diffuser

Model: JND

The Holyoake Jet nozzle diffuser (JND) has been specifically designed to supply large air quantities over long throws with the added benefit of directional control. Jet nozzle diffusers are perfect for supplying large spaces such as halls, airports and swimming pools. The JND consists of a single orifice, which can be adjusted in all directions.

Sizes range from 160mm to 400mm in five incremental sizes. JNDs can be mounted directly into the end of circular duct, or can be mounted into a plenum box, which may supply air to a number of diffusers. Alternatively the JND may be mounted into a wall, or angled ceiling.

Construction

Jet nozzle diffusers are constructed mainly from aluminium spinnings with the exception of the steel surround. The orifice is clamped between the front and rear faces which allows the orifice to move for directional control. Comes in white as standard.

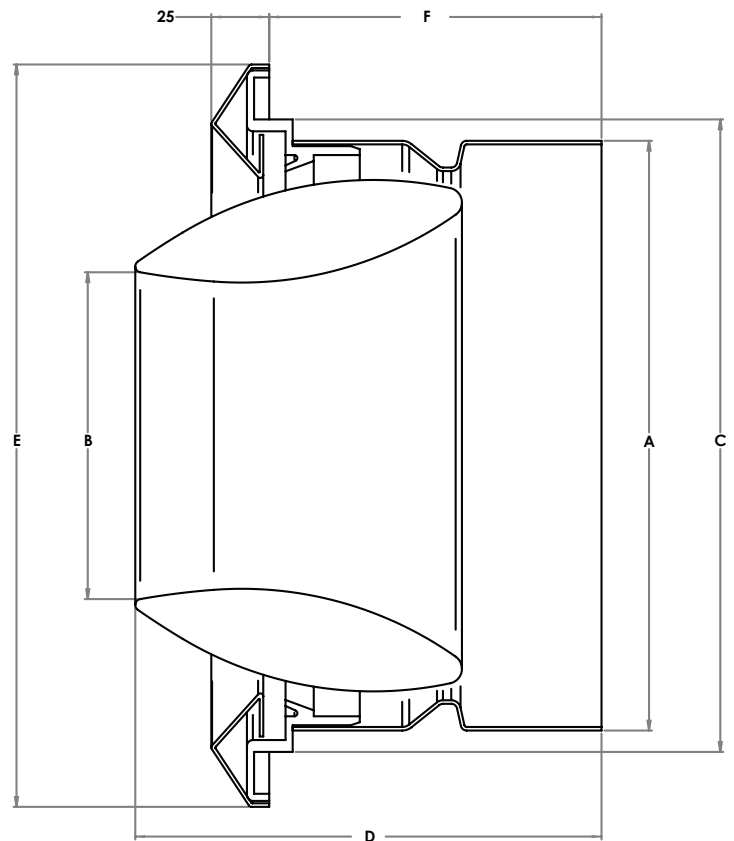
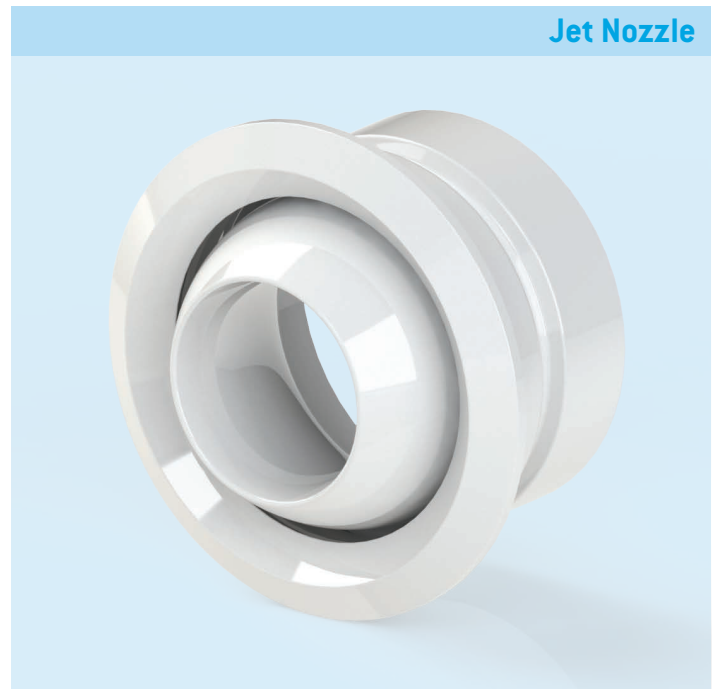
Installation

The JND comes with a concealed mounting system. The diffuser is securely fixed in place using fasteners to the wall or ceiling. The front cover face-plate simply twists on to the diffuser to cover the mounting system and provide a seamless finish.

Features

- Simple installation
- Modern aesthetic look.
- Adjustable core
- Directional control
- Long throws

Size	Dimensions (mm)					
	A	B	C	D	E	F
160	159	85	168	130	210	110
200	198	114	215	150	255	118
250	251	142	263	170	300	137
360	355	200	363	215	425	160
400	399	231	407	245	471	168



Nominal Size		Air Flow Rate (l/s)									
		20	30	50	70	100	150	200	300	400	500
160	Throw (m)	0.6	4.6	10.6	14.1						
	Static Pressure (Pa)	7.8	17.4	47.5	92.1						
	NC	<20	<20	<20	28						
200	Throw (m)		1.5	5.0	9.8	15.0	18.0				
	Static Pressure (Pa)		3.8	10.9	21.9	45.8	105.7				
	NC		<20	<20	20	27	36				
250	Throw (m)			2.3	6.7	12.1	18.0	19.9			
	Static Pressure (Pa)			6.1	11.8	24.0	53.6	94.8			
	NC			<20	<20	20	26	38			
360	Throw (m)					7.7	12.5	16.8	23.8	28.8	
	Static Pressure (Pa)					5.4	12.1	21.3	47.5	83.9	
	NC					<20	<20	23	28	35	
400	Throw (m)						10.3	14.0	20.2	24.8	27.8
	Static Pressure (Pa)						7.3	13.1	29.7	53.0	83.1
	NC						<20	21	24	26	35

Heating Throw Factors			
Size	Heating Differential		
	5°C	10°C	20°C
160	1.40	0.95	0.7
200	1.30	0.90	0.65
250	1.20	0.85	0.60
360	1.10	0.75	0.55
400	1.00	0.65	0.45

To estimate maximum vertical projection under heating conditions multiply jet throw data by the relevant factor.

Nominal Duct Size	Approximate Weight in Kg.
160	0.7
200	1.1
250	1.8
360	2.9
400	3.4

Notes on Performance Data

- Listed throw distances are to a terminal velocity (Vt) of 0.5 m/s for isothermal conditions.
- The NC values are based on a room absorption of 10dB re 10⁻¹² Watts.
- To estimate vertical projection under cooling conditions multiply throw factors as follows:-
10°C cooling x 1.15, 5°C cooling by 1.10.
- Due to lab limitations the throws were determined using Computational Fluid dynamics software(CFD).
- Seismic Restraints may be required, but not supplied.

Due to a policy of continuous development and improvement the right is reserved to supply products which may differ slightly from those illustrated and described in this publication.

BHC, DFR, DS & JD

Product Ordering Key and Suggested Specifications

<p>BHC – SIZE – OPTIONS – FINISH</p> <p>High Capacity Barrel Diffuser</p> <p>635 x 300 or 1270 x 300</p> <p>24 V AC or, 230 V AC Actuators / Thermal Power Pill</p> <p>Mill Aluminium Anodized Aluminium Holyoake White Powder Coat</p>	<p>High Capacity Barrel Diffusers shall be Holyoake Series BHC. They shall be designed to be mounted into a supply plenum that may contain a number of BHC units, which will provide high capacity and long throw diffusion. Adjustment is available to change the vertical and horizontal throw and spread.</p> <p>Series BHC shall be finished in Mill Aluminium and fitted with accessories where indicated.</p> <p>All shall be as manufactured by Holyoake.</p>
<p>DFR – FINISH</p> <p>Displacement Floor Mounted Round Diffuser</p> <p>Black Holyoake White Powder Coat</p>	<p>Displacement Floor Mounted Round Diffusers shall be Holyoake Series DFR. They shall be designed to mount into a supply plenum at floor level and to provide an even distribution of air flow at low velocity, thereby creating a draft-less environment. Pressure drop through the displacement diffusers will be such to provide balance within the supply plenum, while being low enough to generate very low noise levels.</p> <p>Series DFR Displacement Diffusers shall be circular.</p> <p>All shall be as manufactured by Holyoake.</p>
<p>DS – W x H – FLANGE – OPTION – FINISH</p> <p>Displacement Step Mounted Diffuser</p> <p>Hole Size</p> <p>17mm 25mm</p> <p>RC Removable Core (25 mm flange only).</p> <p>Powder Coat Mill Aluminium</p>	<p>Displacement Step Mounted Diffusers shall be Holyoake Series DS. They shall be designed to mount into a supply plenum at floor level and to provide an even distribution of air flow at low velocity, thereby creating a draft-less environment. Pressure drop through the displacement diffusers will be such to provide balance within the supply plenum, while being low enough to generate very low noise levels.</p> <p>Series DS Displacement Step Mounted Diffusers are designed to be face fixed, or supplied with the Holyoake Removable Core System (25 mm flange only).</p> <p>All shall be as manufactured by Holyoake.</p>
<p>JD – 250 – OPTIONS – FINISH</p> <p>Jet Diffusers</p> <p>Nominal Size</p> <p>Mounting Plate (Type 1, 2, 3 or 4)</p> <p>Holyoake White Mill Aluminium Powder Coat</p>	<p>Circular Jet Diffusers shall be Holyoake Model JD constructed from spun aluminium cones. JD Jet Diffusers shall be capable of operating in either diffused, or jet air pattern configurations. The air patterns shall be achieved by rotating the cone assembly through 180 degrees. JD Jet Diffusers shall be complete with a mounting system suitable for wall, or ceiling applications.</p> <p>Series JD shall be finished in powder coat and fitted with accessories where indicated.</p> <p>All shall be as manufactured by Holyoake.</p>

Note

For ceiling applications of JD Diffusers, Seismic Restraints would be required, but not supplied.

JND, EL, EL-P, FSD & TLC-EL

Product Ordering Key and Suggested Specifications

JND	-	SIZE	-	FINISH	<p>Holyoake Jet nozzle diffusers shall be of spun aluminium construction with a steel concealed mounting system. They shall be designed to supply large air quantities over large throws.</p> <p>Series JND shall be finished in powder coat and all shall be as manufactured by Holyoake.</p>
Jet Nozzle Diffuser		160, 200, 250, 360, 400		Powder coat white, special colours available on request	

FSD	OPTIONS	<p>Circular floor diffusers shall be Holyoake FSD Series manufactured in glass filled polycarbonate, in self-coloured grey, or black, as standard. Nominal FSD diffuser size shall be 220mm in diameter. The FSD diffuser shall contain a flow regulation damper and the fascia is complete with 'Min/Max' indication.</p> <p>Series FSD mounting clamp and trim ring shall also be manufactured in glass filled polycarbonate. FSD diffusers shall contain a dust/dirt collection basket.</p> <p>All Series FSD materials used are fire retardant and the diffusers shall resist permanent deformation when subject to point loads up to 500 Kg.</p> <p>All shall be as manufactured by Holyoake.</p>
Floor Swirl Diffuser	Die Cast Aluminium Mill Finish, or, Die Cast Aluminium Powder Coat Finish	

EL	-	2	-	S	-	300 x 300	-	ACCESSORIES	-	OPTIONS	-	FINISH	<p>Surface Mounted Eyelash Type</p> <p>EL surface mounted diffusers shall be of the "Eyelash", or curved blade type. They shall be of extruded aluminium construction, with each blade individually adjustable from the face. Optional opposed blade damper can be adjusted through the face of the diffuser.</p> <p>All shall be as manufactured by Holyoake</p>
Series "Eyelash"		Core Model		Style		Duct Size		OBD-1 Opposed Blade damper		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> RC 25 RC 50 CMF </div> Removable Core Frame Option		Holyoake White Mill Aluminium Powder Coat	

EL	-	P	-	2	-	S	-	300 x 150 - 600 x 600	-	ACCESSORIES	-	FINISH	<p>Panel Lay-in Eyelash Type</p> <p>EL-P Panel Lay-in diffusers shall be of the "Eyelash", or curved blade type. They shall be of extruded aluminium construction, with each blade individually adjustable from the face. Optional opposed blade damper can be adjusted through the face of the diffuser.</p> <p>All shall be as manufactured by Holyoake.</p>
Series "Eyelash"		Panel Lay-in Model		Core Model		Style		Duct Size		Module Size		OBD-1 Opposed Blade damper	

TLC-EL	-	2	-	L	-	400 x 150	-	ACCESSORIES	-	FINISH	<p>Curved Frame Eyelash Type</p> <p>TLC-EL diffusers shall be of the "Curved Frame Eyelash" type, with curved blades. They shall be of extruded aluminium construction, with each blade adjustable from the face. Optional opposed blade damper can be adjusted through the face of the diffuser.</p> <p>All shall be as manufactured by Holyoake.</p>
Series Curved Frame "Eyelash"		Core Model		Style		Nominal Duct Size		OBD-1 Opposed Blade damper		Holyoake White Mill Aluminium Powder Coat	

Note

For ceiling applications of EL Diffusers, Seismic Restraints would be required, but not supplied.