CJD

Cylinder Jet Diffuser

Quick Facts

- Jet diffuser for large spaces
- Handles large flow rates
- Long Throw characteristics
- Volume flow rate range - 100 l/s - 2360 l/s
- Easy to install & adjust
- Cylinder rotation & blade adjustment for maximum flexibility
- Mounting – sidewall/duct
- Motorised version available
- Available in a variety of RAL colours

WATERLOO by Swegon

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Technical Description

Design

The CJD is designed to supply a large volume of air into big open spaces such as shopping malls, leisure arenas and gymnasiums and atriums. With adjustable vertical vanes located in a rotational cylinder drum, the diffuser is capable of supplying controlled ventilation over a long throw in both heating and cooling modes. In cases where heating and cooling cycles are frequent we can supply a motorised unit to adjust the discharge angle of the barrel to combat the buoyancy of the warm or cool air jet.

Whilst normally used for horizontal distribution, the diffuser may also be used for vertical projection.

Material and Surface Treatment

Cylinder drum, adjustable direction vanes and flange border are from extruded aluminium sections, cylinder drum ends from aluminium sheet. Silicone treated polypropylene bristle used as seal between cylinder drum and flanged outer frame. Outer flanged frame mitred with corners mechanically cleated. Cylinder drum, adjustable vanes joined by mechanical fittings.

Polyester powder coated to RAL9010 – Matt (20%) finish to all external surfaces.

Alternative standard RAL colours to select from:

- RAL 9016 Matt (20%) finish - White
- RAL 9003 Matt (40%) finish - White
- RAL 9006 Matt (40%) finish - Silver
- RAL 9005 Matt (30%) finish - Black

Model Types

CJD

Manually adjustable cylinder jet diffuser with adjustable vertical vanes located in a rotational cylinder drum, the diffuser is capable of supplying controlled ventilation over a long throw in both heating and cooling modes.

CJD/M

A motorised version of the cylinder jet diffuser to satisfy the demand for remote automatic operation. The cylinder drum oscillates to alter the air discharge angle for heating or cooling modes. Available with a 230 Volt A.C. or 24 Volt D.C. open/close actuator.

Installation

For our range of fixing details, please see our installation, operation & maintenance manual.

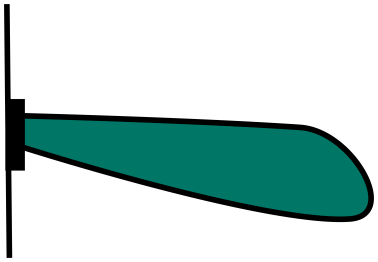
Maintenance

For maintenance guidelines please see our installation, operation & maintenance manual.

Environment

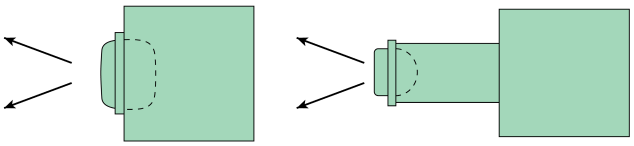
Our standard power coating process is suitable for a C3 Internal environment classification, ISO 12944-2. Design life 15-25 years.

Sidewall - free jet



Project Planning

Cylinder diffusers can be mounted on horizontal or vertical position without affecting the air distribution patterns from the unit.
When mounting on main ducts with a velocity below 5m/s, cylinder diffusers can be mounted directly on the side of the duct.
Where main duct velocity exceeds 5m/s it is recommended that extension collars be installed to take cylinder diffusers out of the main duct airstream.



VELOCITY up to 5m/s

VELOCITY over 5m/s

Waterloo Guidance on Spacing

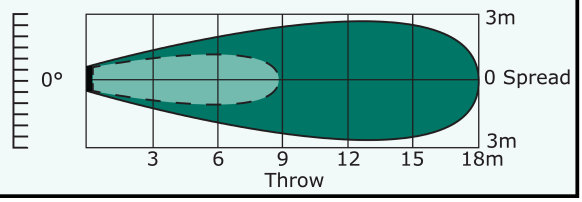
2.3 Deflection Characteristics of Grilles

By adjusting the deflection angle on a grille, the spread and throw can be affected. This ultimately has an effect on spacing between ATDs, as it can allow for a more energy efficient layout. Based on 0.5m/s envelope the following should be considered.

0° deflection

Space between ATD should be equal to 1/3 of the throw, see figure 2.11

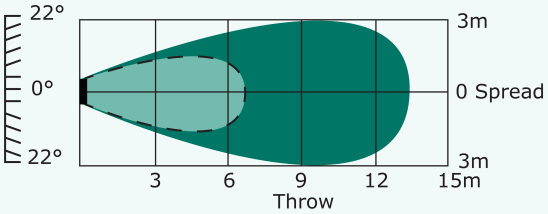
Figure 2.11



22° deflection

Space between ATD should be equal to ½ of the throw, see figure 2.12

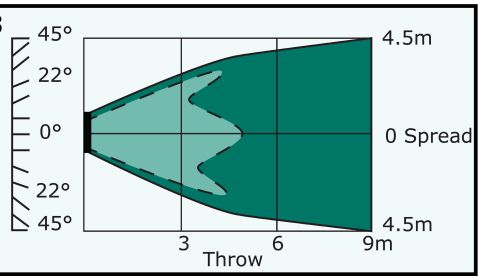
Figure 2.12



45° deflection

Space between ATD should be equal to the throw, see figure 2.13

Figure 2.13



Waterloo Guidance on placement

4.2.1 Approach 1

Divide the room into equal sections along the length (L) ensuring that each individual section has a width: length aspect ratio of at least 1:3 or more. See figure 4.4.

The example shows 4 ATDs, for which the air flow rate for each can be acquired by dividing the total air flow rate (Qt) by the number of total amount of ATDs as represented in the following expression = Qt/4.

Upon obtaining the air flow rate for individual ATDs, the exact throw can be ascertained relative to the segment length (W) from the manufacturer's technical data.

To prevent causing draughts, identify an acceptable air flow drop (based on velocity) which ensures the air flow envelope does not breach the occupied zone, normally a height of 1.8m. See figure 4.5.

Select an ATD size relative to the specific data of the ATD. Remember to consider the above along with temperature differential and position of the ATD in relation to the ceiling.

Note: Observe the pressure drop and noise characteristics to ensure they meet the specification of the given project. Approach 2 and 3 can help mitigate issues that may arise.

Figure 4.4

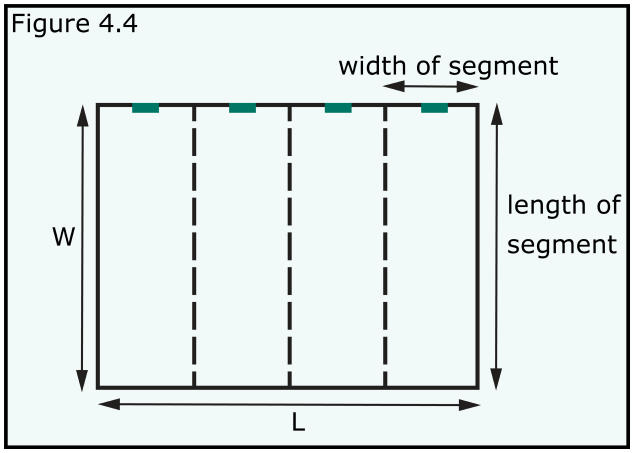
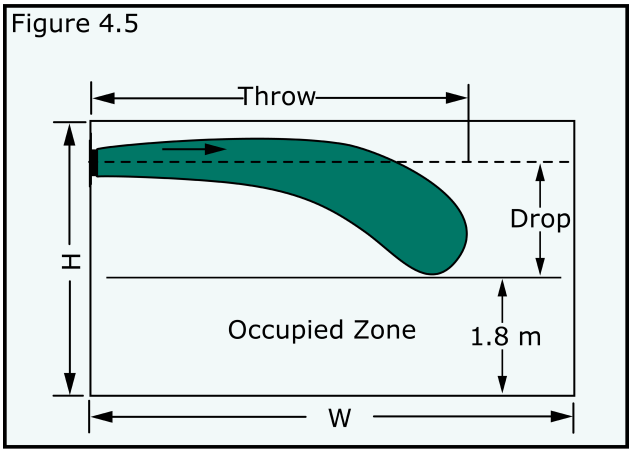


Figure 4.5



4.2.1 Approach 2

By dividing the room area lengthwise, it increases the amount of ATD's, see figure 4.6. This in turn lowers the air flow rate per ATD. Proceed as outlined in Approach 1.

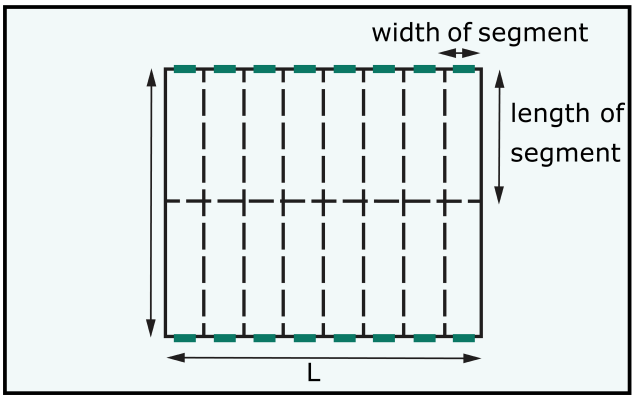
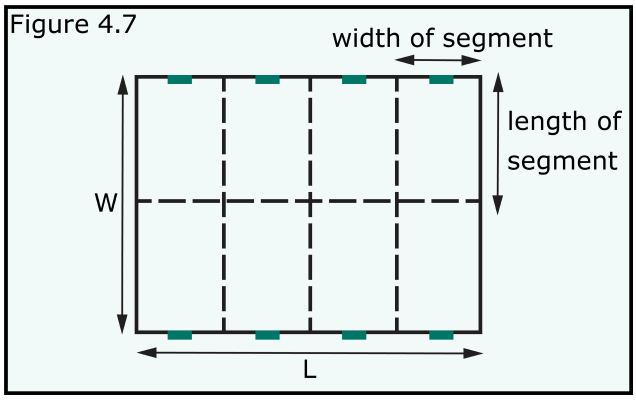


Figure 4.7



4.2.1 Approach 3

Begin by dividing the room by the same aspect ratio (1:3) as seen in Approach 1. Then, maintaining the widths of the segments divide the room area lengthwise, see figure 4.7.

Set the blades to 22° and proceed as before.

Note: As mentioned in 2.3 each individual section must have a width: length aspect ratio of at least 1:2 or more due to the deflection characteristics.

Performance Tables

Throw in Metres	Temp in Diff 0 °C	l/s	100	120	140	165	190	210	240	260	280	310
		Size	S1	S1	S1 S2	S1 S2	S1 S2 S3	S1 S2 S3	S1 S2 S3	S1 S2 S3	S1 S2 S3 S4	S1 S2 S3 S4
		Stat press Pa	30	40	50 20	60 30	80 40 20	100 50 30	130 60 30	150 80 40	180 90 40 20	200 100 50 30
		dBA level	22	24	26 22	31 24	33 28 23	36 30 24	38 32 26	40 34 29	41 36 30 24	43 37 32 27
3	5	Drop	0.1	0.1	0.0 0.1	0.1 0.1	0.1 0.1 0.1	0.0 0.0 0.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.1
	11	or	0.2	0.1	0.1 0.2	0.1 0.1	0.1 0.1 0.1	0.0 0.1 0.1	0.0 0.1 0.1	0.0 0.0 0.1	0.0 0.0 0.1 0.1	0.0 0.0 0.1 0.1
	16	rise	0.2	0.1	0.1 0.2	0.1 0.2	0.1 0.1 0.2	0.1 0.1 0.2	0.0 0.1 0.1	0.0 0.1 0.1	0.0 0.1 0.1 0.2	0.0 0.0 0.1 0.1
	22	in m	0.3	0.2	0.2 0.2	0.1 0.2	0.1 0.2 0.2	0.1 0.1 0.2	0.1 0.1 0.2	0.0 0.1 0.1	0.0 0.1 0.1 0.2	0.0 0.1 0.1 0.2
	Residual vel m/s		0.4	0.5	0.6 0.4	0.8 0.6	0.9 0.7 0.4	1.1 0.8 0.6	1.3 0.9 0.6	1.5 1.1 0.7	1.7 1.3 0.8 0.6	1.8 1.3 0.9 0.7
6	5	Drop	0.6	0.1	0.3 0.5	0.2 0.5	0.2 0.3 0.4	0.1 0.2 0.3	0.1 0.2 0.3	0.1 0.2 0.2	0.1 0.1 0.2 0.4	0.1 0.1 0.2 0.3
	11	or	1.1	0.2	0.6 1.0	0.5 0.8	0.3 0.6 0.8	0.3 0.5 0.7	0.2 0.5 0.7	0.2 0.5 0.7	0.2 0.3 0.4 0.8	0.2 0.2 0.4 0.7
	16	rise	2.0	0.2	1.0 1.5	0.6 1.2	0.5 0.9 1.2	0.3 0.8 1.1	0.3 0.6 1.0	0.3 0.6 1.0	0.2 0.5 0.7 1.1	0.2 0.3 0.6 1.0
	22	in m	2.2	0.3	1.2	0.9 1.7	0.6 1.2 1.7	0.6 0.9 1.5	0.5 0.8 1.4	0.5 0.8 1.4	0.3 0.6 0.9 1.5	0.2 0.4 0.7 1.4
	Residual vel m/s		0.2	0.3	0.4 0.3	0.5 0.3	0.6 0.4 0.3	0.6 0.4 0.3	0.7 0.6 0.4	0.7 0.6 0.4	0.9 0.7 0.5 0.4	1.0 0.8 0.5 0.4
9	5	Drop	1.8	1.2	1.0 1.7	0.8 1.5	0.5 1.0 1.4	0.4 0.8 1.2	0.3 0.6 1.1	0.3 0.5 0.8	0.2 0.6 0.7 1.3	0.2 0.4 0.6 1.1
	11	or	3.7	2.4	1.8 3.4	1.2 3.1	0.8 1.9 2.8	0.8 1.6 2.4	0.7 1.2 2.1	0.6 1.1 1.7	0.5 0.9 1.4 2.4	0.4 0.8 1.2 2.2
	16	rise		4.0	3.0 5.2	2.8 4.3	1.8 3.1 4.3	1.4 2.4 3.7	1.0 2.0 3.4	0.8 1.5 2.4	0.7 1.3 2.3 4.0	0.6 1.1 1.8 3.4
	22	in m		5.2	4.3	3.0	2.1 4.0 5.5	1.7 3.1 4.9	1.4 2.6 4.6	1.1 2.1 3.4	1.0 1.7 3.1 5.2	0.8 1.4 2.4 4.3
	Residual vel m/s		0.2	0.2	0.3 0.2	0.4 0.2	0.4 0.3 0.2	0.5 0.3 0.2	0.6 0.4 0.3	0.6 0.5 0.3	0.7 0.5 0.3 0.3	0.8 0.6 0.4 0.3
12	5	Drop	4.3	3.1	2.4 4.1	1.8 3.4	1.2 2.4 3.4	1.1 1.8 3.0	0.8 1.5 2.8	0.7 1.2 2.0	0.6 1.0 1.8 3.1	0.5 0.9 1.4 2.6
	11	or		5.5	4.3	3.1 5.5	2.3 4.6 5.5	1.8 3.7 5.5	1.5 3.1 4.9	1.2 2.4 3.7	1.1 1.7 3.4 6.1	1.0 1.8 2.9 5.2
	16	rise			6.8	5.2	3.7 6.4	3.1 5.5	2.6 4.3 6.7	2.1 3.7 5.5	2.0 2.8 5.2	1.7 2.6 4.3
	22	in m				6.4	5.2	4.0 6.7	3.4 5.5	2.6 4.9	2.3 4.0 6.1	2.0 3.7 5.8
	Residual vel m/s		0.1	0.2	0.2 0.2	0.3 0.2	0.3 0.2 0.2	0.4 0.3 0.2	0.4 0.3 0.2	0.6 0.5 0.2	0.7 0.4 0.3 0.2	0.6 0.4 0.3 0.2
15	5	Drop	7.9	5.5	4.6 7.3	3.4 5.5	2.4 4.6 5.5	2.0 3.7 5.5	1.6 2.9 4.9	1.3 2.4 4.0	1.1 2.0 3.7 5.8	1.0 1.7 2.8 5.2
	11	or			7.0	5.5	4.0	3.4 6.4	2.8 5.5 8.2	2.3 4.9 6.7	2.0 4.0 6.1	1.7 3.4 5.5
	16	rise					6.7	5.5	4.9 7.6	4.0 6.4	3.4 5.5	2.8 4.9 7.9
	22	in m						7.3	5.8	5.2	4.3 7.0	4.0 6.1
	Residual vel m/s		0.1	0.1	0.2 0.1	0.2 0.1	0.3 0.2 0.1	0.3 0.2 0.2	0.4 0.3 0.2	0.4 0.3 0.2	0.5 0.4 0.2 0.2	0.5 0.4 0.3 0.2
18	5	Drop		9.2	7.0	5.8 9.5	4.3 7.3 9.5	3.7 5.8 8.5	2.8 4.9 7.3	2.2 4.0 6.1	2.0 3.4 5.5 8.5	1.7 3.1 4.9 7.6
	11	or				8.2	6.7	5.8	4.6 8.5	4.0 7.6	3.4 6.1 9.5	3.0 5.8 8.9
	16	rise						9.5	7.6	6.1	5.5 8.9	5.2 7.9 7.9
	22	in m							9.8	8.2	7.0	6.1 6.1
	Residual vel m/s		0.1	0.1	0.1 0.1	0.2 0.1	0.2 0.2 0.1	0.3 0.2 0.1	0.3 0.2 0.1	0.4 0.3 0.2	0.4 0.3 0.2 0.2	0.5 0.3 0.2 0.2
21	5	Drop			11.0	8.9	5.8 11.3	5.5 8.9	4.6 7.3	3.7 6.1 9.5	3.1 5.5 8.2	2.7 4.6 7.3
	11	or					9.5	7.9	6.7	5.5 11.0	4.9 9.5	4.6 8.5
	16	rise								9.5	8.2	7.3
	22	in m									10.7	9.2
	Residual vel m/s		0.1	0.1	0.1 0.1	0.2 0.1	0.2 0.1 0.1	0.2 0.2 0.1	0.3 0.2 0.1	0.3 0.2 0.2	0.4 0.3 0.2 0.1	0.4 0.3 0.2 0.2
24	5	Drop										
	11	or										
	16	rise										
	22	in m										
	Residual vel m/s											

Performance Tables

Throw in Metres	Temp in Diff 0 °C	l/S	330				380			425				470				520				570				610				
		Size	S1	S2	S3	S4	S2	S3	S4	S2	S3	S4	L5	S2	S3	S4	L5	S3	S4	L5	L6	S3	S4	L5	L6	S3	S4	L5	L6	L7
		Stat press Pa	240	120	60	40	150	80	40	190	90	50	30	230	110	60	30	140	80	40	30	170	90	50	30	190	100	50	30	30
		dBA level	44	39	33	29	42	36	31	44	38	33	28	46	40	35	31	42	38	32	28	44	39	34	31	46	41	35	32	29
3	5	Drop	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
	11	or	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1													
	16	rise	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1													
	22	in m	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1													
	Residual vel m/s		2.0	1.5	1.0	0.8	1.8	1.2	0.9	2.0	1.5	1.0	0.8	2.5	1.6	1.3	0.9													
6	5	Drop	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.2	0.2
	11	or	0.1	0.2	0.3	0.5	0.2	0.2	0.4	0.1	0.2	0.3	0.5	0.1	0.2	0.3	0.4	0.1	0.2	0.4	0.5	0.1	0.2	0.3	0.4	0.1	0.2	0.2	0.4	0.5
	16	rise	0.2	0.3	0.5	0.8	0.2	0.4	0.7	0.2	0.3	0.5	0.8	0.2	0.2	0.4	0.6	0.2	0.3	0.5	0.7	0.2	0.3	0.4	0.6	0.1	0.2	0.5	0.6	0.7
	22	in m	0.2	0.3	0.6	1.0	0.3	0.5	0.9	0.3	0.4	0.7	1.1	0.2	0.3	0.6	0.9	0.2	0.4	0.7	0.9	0.2	0.4	0.6	0.8	0.2	0.3	0.5	0.8	0.9
	Residual vel m/s		1.2	0.9	0.6	0.5	1.0	0.7	0.6	1.3	0.8	0.6	0.4	1.5	0.9	0.7	0.5	1.0	0.8	0.6	0.4	2.5	1.6	1.3	0.9	1.3	1.1	0.7	0.6	0.5
9	5	Drop	0.2	0.3	0.5	0.8	0.2	0.4	0.7	0.2	0.3	0.6	0.9	0.2	0.2	0.5	0.7	0.2	0.4	0.6	0.8	0.4	0.8	1.2	1.8	0.2	0.3	0.5	0.6	0.8
	11	or	0.3	0.5	1.0	1.7	0.5	0.8	1.4	0.4	0.6	1.1	1.8	0.3	0.5	1.0	1.4	0.4	0.7	1.5	1.7	0.8	1.5	2.4	3.7	0.3	0.6	0.9	1.3	1.6
	16	rise	0.5	1.0	1.5	2.5	0.8	1.2	2.3	0.6	0.9	1.8	2.8	0.5	0.8	1.4	2.3	0.6	1.1	1.8	2.4	1.2	2.3	4.0	5.2	0.4	0.9	1.4	2.0	2.4
	22	in m	0.7	1.3	2.1	3.4	1.0	1.6	2.8	0.8	1.2	2.4	3.7	0.7	1.0	1.9	3.1	0.8	1.4	2.4	3.4	1.6	3.1	4.9	6.1	0.6	1.1	1.8	2.6	3.1
	Residual vel m/s		0.9	0.6	0.4	0.4	0.7	0.5	0.4	0.9	0.6	0.5	0.3	1.1	0.7	0.6	0.4	0.8	0.7	0.4	0.3	0.7	0.6	0.4	0.3	1.0	0.8	0.5	0.4	0.4
12	5	Drop	0.4	0.7	1.2	2.0	0.6	1.0	1.7	0.5	0.7	1.4	2.3	0.4	0.6	1.1	1.8	0.5	0.9	1.5	2.0	0.4	0.8	1.2	1.8	0.4	0.7	1.1	1.5	1.8
	11	or	0.8	1.5	2.3	4.0	1.2	1.9	3.4	1.0	1.4	2.8	4.6	0.8	1.2	2.2	3.4	1.0	1.0	3.1	4.0	0.8	1.5	2.4	3.7	0.7	1.3	2.2	3.1	3.7
	16	rise	1.4	2.3	3.7	6.1	1.7	2.9	5.5	1.4	2.2	4.0	6.4	1.2	1.7	3.4	5.5	1.5	1.1	4.6	6.1	1.2	2.3	4.0	5.2	1.1	1.9	3.4	4.6	5.8
	22	in m	1.7	3.0	4.6		2.3	3.7	6.4	2.0	2.9	5.5		1.6	2.3	4.3	6.4	1.9	1.5	6.1		1.6	3.1	4.9	6.1	1.4	2.5	4.3	5.8	
	Residual vel m/s		0.7	0.5	0.3	0.3	0.6	0.4	0.3	0.7	0.5	0.4	0.2	0.8	0.6	0.4	0.3	0.6	0.5	0.3	0.3	0.7	0.6	0.4	0.3	0.8	0.6	0.4	0.3	0.3
15	5	Drop	0.9	1.5	2.4	4.0	1.1	1.8	3.4	1.0	1.4	2.8	4.3	0.8	1.2	2.3	3.4	1.0	1.7	3.1	4.0	0.8	1.5	2.4	3.7	0.7	1.3	2.2	3.1	3.7
	11	or	1.5	3.1	4.6	7.0	2.3	3.7	6.1	1.9	2.9	5.2	8.2	1.6	2.3	4	6.4	1.9	1.7	5.8	7.6	1.6	2.9	4.9	6.1	1.4	2.2	4.3	6.1	6.7
	16	rise	2.6	4.3	6.4		3.4	5.5		1.5	4.8	7.9		2.4	3.7	6.4		2.9	2.5			2.4	4.6	7.0		2.1	4.0	6.1		
	22	in m	3.4	5.8			4.6	6.7		3.7	5.5	9.8		3.1	4.9	7.6		3.7	3.4			3.1	5.5	8.9		2.8	5.2	8.2		
	Residual vel m/s		0.6	0.4	0.3	0.2	0.5	0.4	0.3	0.6	0.4	0.3	0.2	0.7	0.5	0.4	0.3	0.6	0.4	0.3	0.2	0.6	0.5	0.3	0.3	0.7	0.5	0.4	0.3	0.2
18	5	Drop	1.6	2.6	4.0	6.1	2.0	3.1	5.8	1.7	2.5	4.6	7.0	1.3	2.0	3.7	6.1	1.7	2.9	5.2	6.4	1.3	2.6	4.3	5.8	1.2	2.2	3.7	5.5	5.8
	11	or	2.5	5.2	7.0		4.0	6.1	9.8	3.4	4.9	7.9		2.7	4.0	6.7		3.2	5.8	9.5		2.8	4.9	8.2		2.4	4.3	7.3	9.5	
	16	rise	4.3	6.7			5.8	8.5		2.9	7.0			4.0	5.8			4.9	8.5			4.3	7.0			3.7	6.1			
	22	in m	5.8	9.2			7.6			5.8	8.5			5.2	7.6			6.1				5.2	8.5			4.6	8.2			
	Residual vel m/s		0.5	0.4	0.3	0.2	0.5	0.3	0.2	0.5	0.4	0.3	0.2	0.6	0.4	0.3	0.2	0.5	0.4	0.2	0.2	0.5	0.4	0.3	0.2	0.6	0.5	0.3	0.2	0.2
21	5	Drop	2.3	4.0	6.1	9.2	3.1	5.2	8.2	2.7	4.0	6.7	10.7	2.1	3.4	5.8	8.9	2.8	4.6	7.6	10.1	2.1	4.0	6.4	8.5	1.9	3.5	5.8	7.9	9.2
	11	or	4.0	7.6	10.7		6.1	9.2		5.2	7.0			4.3	5.8	10.4		5.2	7.9			4.3	6.7			4.0	6.1			
	16	rise	6.4	10.1			8.5			6.7	10.7			6.1	8.5			7.0				6.1	10.7			5.5	9.8			
	22	in m	8.5				11.0			8.5				7.9				8.9				7.9				6.7				
	Residual vel m/s		2.5	0.3	0.2	0.2	0.4	0.3	0.2	0.5	0.3	0.2	0.2	0.6	0.4	0.3	0.2	0.5	0.3	0.2	0.2	0.5	0.4	0.2	0.2	0.5	0.4	0.3	0.2	0.2
24	5	Drop																4.0	6.1	13.1		3.1	5.8	9.5	12.5	3.0	5.2	8.5	11.6	
	11	or																7.0	11.9			6.1	9.8			5.5	8.9			
	16	rise																10.4				8.6				7.9				
	22	in m																				10.7				9.8				
	Residual vel m/s																	0.4	0.3	0.2	0.1	0.4	0.3	0.2	0.2	0.5	0.4	0.2	0.2	0.2

Performance Tables

Throw in Metres	Temp in Diff 0 °C	l/s	660					710				760					850				940					
		Size	S3	S4	L5	L6	L7	S4	L5	L6	L7	S4	L5	L6	L7	L8	S4	L5	L6	L7	L8	S4	L5	L6	L7	L8
		Stat press Pa	220	120	60	40	30	140	70	40	30	150	80	50	40	30	190	100	60	50	30	230	110	80	60	40
		dBA level	47	42	37	33	31	43	38	34	32	45	39	36	34	32	47	41	38	36	33	49	43	39	36	35
6	5	Drop	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.2					
	11	or	0.1	0.2	0.2	0.3	0.4	0.1	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.4	0.1	0.1	0.2	0.2	0.3					
	16	rise	0.1	0.2	0.3	0.5	0.7	0.2	0.3	0.4	0.5	0.2	0.2	0.4	0.4	0.7	0.1	0.2	0.2	0.4	0.5					
	22	in m	0.2	0.3	0.5	0.16	0.8	0.2	0.4	0.6	0.7	0.2	0.3	0.5	0.6	0.9	0.2	0.3	0.4	0.5	0.6					
	Residual vel m/s		1.5	1.3	0.8	1.6	0.5	1.3	0.9	0.7	0.6	1.5	0.9	0.7	0.7	0.5	1.9	1.1	0.9	0.7	0.6					
9	5	Drop	0.1	0.2	0.4	0.6	0.8	0.2	0.3	0.6	0.6	0.2	0.3	0.4	0.5	0.7	0.2	0.2	0.4	0.4	0.6	0.1	0.2	0.3	0.3	0.5
	11	or	0.2	0.5	0.7	1.1	1.5	0.4	0.6	1.1	1.2	0.4	0.6	0.8	1.0	1.4	0.3	0.5	0.7	0.9	1.1	0.2	0.4	0.5	0.7	0.9
	16	rise	0.4	0.7	1.1	1.7	2.1	0.6	1.0	1.6	1.7	0.6	0.9	1.3	1.5	2.1	0.5	0.7	1.0	1.3	1.6	0.4	0.6	0.8	1.0	1.4
	22	in m	0.5	1.0	1.6	2.2	2.9	0.8	1.3	2.1	2.3	0.9	1.2	1.8	2.1	2.9	0.6	1.0	1.4	1.7	2.1	0.5	0.8	1.0	1.4	1.8
	Residual vel m/s		1.1	0.9	0.6	0.4	0.4	0.9	0.6	0.5	0.4	1.1	0.6	0.5	0.5	0.4	1.3	08	0.6	0.5	0.5	1.5	0.9	0.7	0.7	0.5
12	5	Drop	0.3	0.6	0.9	1.3	1.8	0.5	0.8	1.3	1.4	0.4	0.7	1.1	1.2	1.7	0.3	0.6	0.9	1.0	1.4	0.3	0.5	0.7	0.8	1.1
	11	or	0.6	1.1	1.8	2.8	3.7	1.0	1.6	2.6	2.8	0.8	1.4	2.1	2.4	3.4	0.7	1.1	1.7	2.1	2.7	0.6	0.9	1.3	1.6	2.3
	16	rise	0.9	1.7	2.9	4.0	5.2	1.5	2.5	3.7	4.6	1.3	2.1	3.1	3.7	5.2	1.0	1.7	2.4	3.0	4.0	0.9	1.4	1.8	2.4	3.4
	22	in m	1.2	2.4	3.4	5.5	6.1	1.9	3.4	4.9	5.8	1.7	2.9	4.3	4.9	6.4	1.4	2.3	3.4	4.0	5.5	1.1	1.8	2.6	3.4	4.6
	Residual vel m/s		0.8	0.7	0.5	0.3	0.3	0.8	0.5	0.4	0.3	0.8	0.5	0.4	0.4	0.3	1.0	0.6	0.5	0.4	0.4	1.2	0.7	0.6	0.5	0.4
15	5	Drop	0.6	1.1	1.8	2.8	3.4	0.1	1.6	2.5	2.8	0.8	1.4	2.1	2.4	3.4	0.7	1.1	1.7	2.0	2.6	0.6	0.9	1.3	1.7	2.3
	11	or	1.2	2.1	3.7	5.5	6.4	1.8	3.1	5.2	5.8	1.6	2.9	4.3	4.6	6.4	1.3	2.3	3.4	4.0	5.2	1.0	1.8	2.5	3.1	4.6
	16	rise	1.8	3.4	5.5	7.6		2.8	4.9	7.0	8.2	2.4	4.3	6.1	7.0		2.0	3.4	4.6	5.8	7.3	1.7	2.8	3.7	4.9	6.4
	22	in m	2.4	4.3	6.4	9.5		3.7	6.1			3.4	5.8	7.9			2.8	4.3	6.1	7.6		2.1	3.4	4.9	6.1	8.2
	Residual vel m/s		0.7	0.6	0.4	0.3	0.2	0.7	0.5	0.3	0.3	0.7	0.5	0.4	0.3	0.3	0.9	0.5	0.4	0.4	0.3	0.9	0.6	0.5	0.4	0.3
18	5	Drop	1.1	1.9	3.4	4.6	5.8	1.6	2.8	4.3	4.9	1.4	2.4	3.7	4.3	5.8	1.2	2.0	2.8	3.4	4.3	1.0	1.6	2.2	2.8	4.0
	11	or	2.1	3.7	6.1	8.5		3.1	5.8	8.2	8.9	2.8	2.8	6.7	7.6		2.3	4.0	5.5	6.4	8.2	1.8	3.1	4.6	5.5	7.3
	16	rise	3.1	5.8	9.5			4.9	8.2			4.6	7.3				3.7	5.5	7.6	9.5		2.8	4.9	6.1	7.6	
	22	in m	4.3	7.0				7.3				5.8	8.9				4.6	7.0				3.7	6.1	8.2		
	Residual vel m/s		0.7	0.5	0.3	0.3	0.2	0.6	0.4	0.3	0.2	1.6	0.4	0.3	0.3	0.2	0.7	0.5	0.4	0.3	0.3	0.8	0.5	0.4	0.4	0.3
21	5	Drop	1.7	2.9	5.2	7.0	8.2	2.2	4.6	6.4	7.0	2.3	4.0	5.8	6.1	8.5	1.8	3.1	4.3	5.5	6.4	1.5	2.6	3.4	4.6	6.1
	11	or	3.4	5.8	9.8			4.9	8.2			4.6	7.9	10.4			3.5	6.1	8.2	10.1		2.9	5.2	6.7	8.2	
	16	rise	5.2	8.5				7.0				6.4	11.0				5.8	8.5				4.6	7.3	9.8		
	22	in m	6.1	11.0				11.0				8.2					6.7	11.3				5.8	8.9			
	Residual vel m/s		0.6	0.5	03	0.2	0.2	0.5	0.3	0.2	0.2	0.6	0.4	0.3	0.2	0.2	0.7	0.4	0.3	0.3	0.2	0.7	0.5	0.4	0.3	0.3
24	5	Drop	2.6	4.6	7.3	10.4	11.9	3.7	6.4	9.8	10.1	3.4	5.8	7.9	9.2	12.2	2.8	4.6	6.1	7.6	9.8	2.2	3.7	5.5	6.1	8.5
	11	or	5.2	7.9				6.7	11.9			6.1	11.0				5.2	8.6	12.2			4.3	7.0	10.1	11.9	
	16	rise	7.0	12.5				10.4				9.5					7.6	12.2				6.4	10.7			
	22	in m	8.9									11.9					9.5					8.5	12.8			
	Residual vel m/s		0.5	0.4	0.3	0.2	0.2	0.5	0.3	0.2	0.2	0.5	0.3	0.2	0.2	0.2	0.6	0.4	0.3	0.3	0.2	0.7	0.4	0.3	0.3	0.2
27	5	Drop																				3.0	5.2	7.3	8.9	11.9
	11	or																				5.8	8.9	14.0		
	16	rise																				9.2				
	22	in m																				11.3				
	Residual vel m/s																					0.6	0.4	0.3	0.3	0.2
30	5	Drop																				4.3	6.7	9.5	11.6	
	11	or																				7.6	13.7			
	16	rise																				12.2				
	22	in m																				15.0				
	Residual vel m/s																					0.6	0.4	0.3	0.2	0.2
36	5	Drop																				6.7	11.3	16.2		
	11	or																				12.2				
	16	rise																								
	22	in m																								
	Residual vel m/s																					0.5	0.3	0.2	0.2	0.2

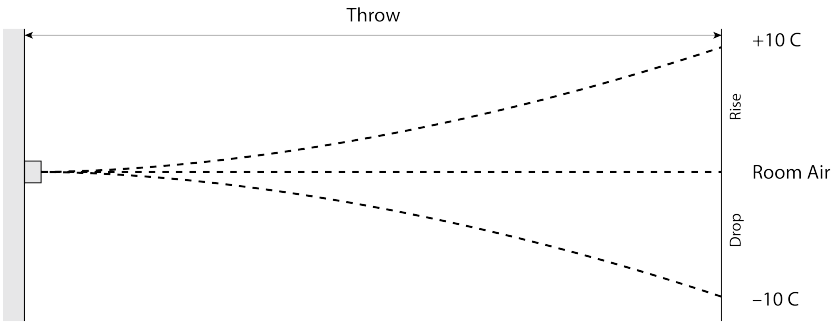
Performance Tables

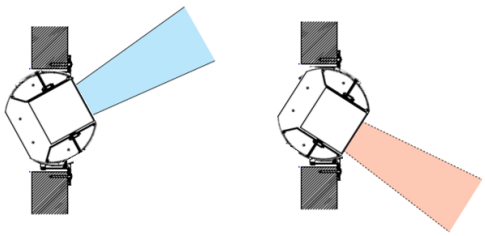
Throw in Metres	Temp Diff 0 °C	l/s	1040				1130				1230				1320				1420				1650			1890		2125		2360
		Size	L5	L6	L7	L8	L5	L6	L7	L8	L5	L6	L7	L8	L5	L6	L7	L8	L5	L6	L7	L8	L6	L7	L8	L7	L8	L7	L8	L8
		Stat press Pa	140	90	70	50	170	110	80	60	190	130	90	70	220	140	100	80	250	160	120	80	220	160	110	210	150	250	180	220
		dBA level	46	42	40	37	46	42	40	37	49	46	43	40	46	42	40	37	52	48	46	43	52	49	46	52	49	53	51	54
6	5	Drop																												
	11	or																												
	16	rise																												
	22	in m																												
	Residual vel m/s																													
9	5	Drop	0.2	0.2	0.3	0.4	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
	11	or	0.3	0.4	0.6	0.8	0.2	0.4	0.5	0.6	0.2	0.3	0.4	0.5	0.2	0.3	0.3	0.5	0.2	0.2	0.3	0.4	0.2	0.2	0.3	0.4	0.5	0.1	0.2	0.2
	16	rise	0.5	0.7	0.9	1.1	0.4	0.6	0.7	0.9	0.3	0.5	0.6	0.7	0.3	0.4	0.5	0.7	0.2	0.3	0.5	0.6	0.2	03	0.3	0.6	0.8	0.2	0.3	0.2
	22	in m	0.6	0.9	1.1	1.5	0.5	0.7	0.9	1.2	0.4	0.6	0.8	1.1	0.4	0.6	0.7	0.9	0.3	0.5	0.6	0.8	0.4	0.4	0.6	0.9	1.0	0.3	0.4	0.3
			1.1	0.9	0.8	0.6	1.1	0.9	0.8	0.7	1.4	1.0	0.9	0.7	1.5	1.2	1.0	0.9	1.8	1.2	1.1	0.9	1.6	1.4	1.1	1.2	1.0	1.9	1.6	1.8
12	5	Drop	0.4	0.5	0.7	1.0	0.3	0.5	0.6	0.8	0.3	0.4	0.5	0.6	0.2	0.3	0.4	0.6	0.2	0.3	0.4	0.5	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.2
	11	or	0.7	1.1	1.4	1.9	0.6	0.9	1.1	1.5	0.5	0.8	1.0	1.3	0.4	0.6	0.8	1.1	0.4	0.6	0.7	1.0	0.4	0.5	0.7	0.5	0.5	0.3	0.4	0.3
	16	rise	1.1	1.7	2.2	2.8	0.9	1.3	1.7	2.1	0.8	1.1	1.5	2.0	0.6	1.0	1.2	1.7	0.6	0.8	1.1	1.5	0.6	0.8	1.1	0.6	0.8	0.5	0.7	0.5
	22	in m	1.3	2.1	2.8	3.7	1.2	1.8	2.2	2.7	1.1	1.4	2.0	2.6	0.9	1.3	1.6	2.1	0.8	1.1	1.4	2.0	0.9	1.0	1.5	0.7	1.1	0.6	0.9	0.8
			0.9	0.7	0.6	0.5	0.9	0.7	0.6	0.5	1.1	0.9	0.7	0.6	1.2	0.9	0.8	0.7	1.3	1.0	0.9	0.7	1.2	1.0	0.9	1.1	1.0	1.5	1.2	1.4
15	5	Drop	0.7	1.1	1.4	1.9	0.6	0.9	1.1	1.5	0.5	0.8	1.0	1.2	0.5	0.6	0.8	1.1	0.4	0.6	0.7	1.0	0.4	0.5	0.7	0.4	0.5	0.3	0.4	0.3
	11	or	1.4	2.2	2.8	3.7	0.8	1.8	2.2	3.1	1.0	1.5	2.0	2.5	0.9	1.2	1.6	2.1	0.7	1.1	1.4	2.0	0.8	1.0	1.4	0.8	1.0	0.6	0.9	0.7
	16	rise	2.3	3.1	4.0	5.8	1.8	2.7	3.4	4.6	1.6	2.2	3.0	3.7	1.3	1.9	2.4	3.4	1.1	1.6	2.1	3.1	1.2	1.5	2.1	1.2	1.7	1.0	1.4	1.1
	22	in m	2.9	4.3	5.2	6.7	2.4	3.7	4.3	6.1	2.1	2.9	3.7	5.2	1.7	2.6	3.4	4.3	1.5	2.1	3.1	4.0	1.7	2.0	2.9	1.5	2.2	1.3	1.8	1.4
			0.8	0.6	0.5	0.4	0.8	0.6	0.5	0.5	0.9	0.7	0.6	0.5	1.0	0.8	0.7	0.6	1.1	0.8	0.7	0.6	1.1	0.9	0.7	0.9	0.9	1.3	1.1	1.2
18	5	Drop	1.3	1.2	2.4	3.4	1.0	1.5	2.3	2.6	0.9	1.3	1.7	2.1	0.8	1.1	1.4	1.8	0.7	1.0	1.3	1.8	0.7	0.9	1.2	0.7	0.9	0.6	0.8	0.6
	11	or	2.5	3.7	4.6	6.1	2.1	3.1	4.0	5.5	1.8	2.6	3.4	4.6	1.5	2.3	2.8	4.0	1.3	1.8	2.6	3.4	1.4	1.7	2.4	1.4	1.7	1.1	1.5	1.2
	16	rise	3.7	5.5	6.4	9.2	3.4	4.6	5.5	7.3	2.9	4.0	4.9	6.1	2.3	3.4	4.3	5.8	2.0	2.8	3.7	5.2	2.1	2.6	3.7	2.0	2.8	1.7	2.4	1.8
	22	in m	4.9	7.0	8.2		4.0	6.1	7.0	9.5	3.4	5.2	6.1	8.2	3.1	4.6	5.8	7.0	2.7	3.7	5.2	6.1	2.9	3.4	4.6	2.7	3.4	2.1	3.1	2.4
			0.6	0.5	0.4	0.3	0.7	0.5	0.5	0.4	0.8	0.6	0.5	0.4	0.9	0.7	0.6	0.5	0.9	0.7	0.6	0.5	0.9	0.8	0.7	1.1	1.0	1.1	0.9	1.0
21	5	Drop	2.1	3.1	3.7	5.2	1.7	2.4	3.1	4.3	1.8	2.1	2.7	3.4	1.2	1.8	2.2	3.1	1.1	1.5	2.0	2.8	1.1	1.4	2.0	1.1	1.5	0.9	1.2	0.9
	11	or	4.0	5.5	6.7	9.8	3.4	4.9	5.8	7.9	2.8	4.3	5.2	6.7	2.4	3.7	4.6	6.1	2.1	3.1	4.0	5.2	2.4	2.8	4.0	2.1	2.9	1.8	2.4	2.0
	16	rise	5.8	8.2	10.1		5.8	7.0	8.5	11.0	4.6	6.1	7.6	9.5	4.0	5.5	6.4	8.5	3.4	4.6	6.1	7.6	3.4	4.0	5.8	3.4	4.6	2.8	3.7	3.0
	22	in m	7.0	11.0			6.1	9.5	11.0		5.5	6.7	9.8		4.9	6.7	8.2	10.7	4.3	5.8	7.6	9.5	4.6	5.2	7.0	4.3	5.8	3.4	4.9	4.0
			0.6	0.4	0.4	0.3	0.6	0.5	0.4	0.4	0.7	0.5	0.5	0.4	0.8	0.6	0.5	0.4	0.8	0.7	0.6	0.5	0.8	0.7	0.6	0.7	0.7	0.9	0.8	0.9
24	5	Drop	3.1	4.4	5.5	7.0	2.6	3.7	4.6	6.1	2.2	3.1	4.0	5.2	1.8	2.8	3.4	4.6	1.6	2.2	3.1	4.0	1.7	2.1	2.9	1.6	2.3	1.4	1.8	1.4
	11	or	5.8	8.2	10.4		5.2	7.0	8.5	11.3	4.3	6.1	7.3	9.8	3.8	5.5	6.4	8.9	3.1	4.6	5.8	7.3	3.4	4.3	5.8	3.4	4.6	2.8	3.7	3.0
	16	rise	8.5	11.9			7.3	10.1	12.5		6.4	8.5	10.7		5.5	7.6	9.5	12.2	5.2	6.4	8.2	10.7	5.2	6.1	8.2	4.9	6.1	4.1	5.5	4.6
	22	in m	10.4				8.9				7.6	11.0			7.0	9.8	12.2		6.1	8.2	11.0		6.4	7.3	10.1	6.1	8.2	5.2	6.4	5.8
	Residual vel m/s		0.5	0.4	0.3	0.3	0.6	0.4	0.4	0.3	0.6	0.5	0.4	0.4	0.7	0.5	0.5	0.4	0.8	0.6	0.5	0.4	0.7	0.6	0.5	0.7	0.6	0.9	0.7	0.8
27	5	Drop	4.4	6.1	7.3	10.1	3.5	5.2	6.1	8.2	3.4	4.4	5.8	7.0	2.8	4.0	4.9	6.1	2.3	3.1	4.6	5.5	2.4	2.9	4.0	2.3	3.4	1.8	2.6	2.0
	11	or	8.2	11.3	14.0		6.7	9.5	11.3		6.1	8.2	10.4	14.0	5.2	7.3	9.2	11.9	4.6	6.1	8.2	10.4	5.2	5.8	7.9	4.7	6.1	3.8	5.2	4.3
	16	rise	12.2				10.1				9.2	12.2			7.9	10.7	13.1		6.7	9.2	11.3	15.3	7.0	8.2	11.0	6.4	8.9	5.8	7.3	6.1
	22	in m					12.2				10.7				9.5	12.2			8.5	11.3			9.2	10.4		8.2	11.0	7.0	9.5	7.9
	Residual vel m/s		0.5	0.4	0.3	0.2	0.5	0.4	0.3	0.3	0.6	0.5	0.4	0.3	0.6	0.5	0.4	0.4	0.7	0.5	0.5	0.4	0.7	0.6	0.5	0.6	0.6	0.8	0.7	0.8
30	5	Drop	5.8	8.2	9.8	13.4	5.2	6.4	8.2	10.7	4.4	6.1	7.3	9.5	3.8	5.3	6.1	8.2	3.2	4.0	5.8	7.3	3.4	4.1	5.5	3.4	4.3	2.7	3.4	2.8
	11	or	11.3	15.3			9.5	13.4			8.2	11.0	14.0		7.3	9.8	12.2		6.1	8.2	11.0	14.3	6.4	7.6	10.4	6.1	8.2	5.5	6.4	5.8
	16	rise					14.0				11.9				10.7	14.6			9.5	11.9			9.5	10.7	15.6	8.9	11.9	7.3	9.8	8.2
	22	in m									14.3				12.8				11.6				12.2	14.3		11.3	15.6	9.5	12.2	10.4
	Residual vel m/s		0.4	0.3	0.3	0.2	0.5	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.6	0.5	0.4	0.3	0.6	0.5	0.4	0.4	0.6	0.5	0.4	0.6	0.5	0.7	0.6	0.7
36	5	Drop	9.5	13.4	16.2		8.2	10.7	14.3		7.0	9.5	11.9	16.2	6.6	8.2	10.4	13.7	5.6	7.0	9.2	11.9	6.0	6.4	8.5	5.6	6.7	4.6	6.1	4.9
	11	or					15.9				13.4				11.9	16.8			10.1	14.3	18.6		11.7	12.8	18.3	10.4	14.0	8.5	11.0	9.5
	16	rise													18.3				16.2				15.9	18.3		14.6		12.2	16.8	13.4
	22	in m																										16.2		18.3
	Residual vel m/s		0.4	0.3	0.2	0.2	0.4	0.3	0.3	0.2	0.5	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.6	0.4	0.4	0.3	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.6

Selection Guide

Discharge Correction

Supply air temperature will affect the throw and air jet will need correction to achieve table throw figures.

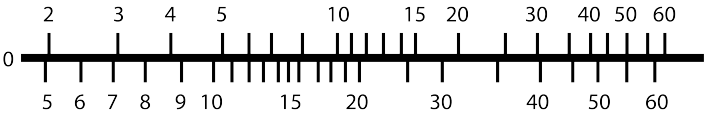




Rise or drop (meters)	Throw (metres)										
	3	6	9	12	15	18	21	24	27	31	37
0.14	3	2	1	1							
0.3	6	3	2	1	1	1					
0.5	11	6	4	3	2	2	2				
1.1		11	8	6	5	4	3	3			
1.6		16	10	9	7	6	5	4	4		
2.5		23	16	12	10	9	8	7	5	5	
3		27	18	14	11	10	8	7	6	6	
4.5			27	21	17	14	12	11	9	9	7
5.5				26	21	17	15	14	12	12	10
7.5					26	22	19	16	15	13	11
9						26	22	20	19	16	13
10.5							26	23	20	18	15
12								26	23	21	17
13.5									26	24	20
15										26	22
16.5											24
18											26

Example: from performance table, required throw 15m and air vol 610 l/S, using S4 diffuser @ 11 °C gives 2.2m drop/rise, air will need directing up (cooling) 9 ° or down (heating) 9 ° (figs by interpolation).

Vertical Vane Angle Setting (Degrees)



Percentage Decrease in Throw

Example: a 5 degree change of blade angle causes a 10% decrease in throw.

Sizing

- Aerodynamic testing carried out in general accordance to BS EN 12238:2001 (Ventilation for buildings - Air terminal devices - Aerodynamic testing and rating for mixed flow applications).
- Throw data is based on Isothermal conditions with correction for heating and cooling conditions. Apply the drop or rise figures to the discharge correction table.
- Pressure loss measurements are shown as static pressure.
- Acoustic testing carried out in general accordance to BS EN ISO 5135:1999 acoustics. (Determination of sound power levels of noisefrom air-terminal devices, air-terminal units, dampers and valves by measurements in a reverberation room).
- Noise data is sound pressure level with an applied A-weighting (LpA). Presented figures are based on a product in a room with 8dB room absorption.

Throw in Metres	Temp in Diff 0 °C	L/S	330				380			425				470				520				570						610		
		Size	S1	S2	S3	S4	S2	S3	S4	S2	S3	S4	L5	S2	S3	S4	L5	S3	S4	L5	L6	S3	S4	L5	L6	S3	S4	L5	L6	L7
		Stat press Pa	240	120	60	40	150	80	40	190	90	50	30	230	110	60	30	140	80	40	30	170	90	50	30	190	100	50	30	30
		dBA level	44	39	33	29	42	36	31	44	38	33	28	46	40	35	31	42	38	32	28	44	39	34	31	46	41	35	32	29
3	5	Drop	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
	11	or	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1													
	16	rise	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1													
	22	in m	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1													
	Residual vel m/s		2.0	1.5	1.0	0.8	1.8	1.2	0.9	2.0	1.5	1.0	0.8	2.5	1.6	1.3	0.9													
6	5	Drop	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.2	0.2
	11	or	0.1	0.2	0.3	0.5	0.2	0.2	0.4	0.1	0.2	0.3	0.5	0.1	0.2	0.3	0.4	0.1	0.2	0.4	0.5	0.1	0.2	0.3	0.4	0.1	0.2	0.2	0.4	0.5
	16	rise	0.2	0.3	0.5	0.8	0.2	0.4	0.7	0.2	0.3	0.5	0.8	0.2	0.2	0.4	0.6	0.2	0.3	0.5	0.7	0.2	0.3	0.4	0.6	0.1	0.2	0.5	0.6	0.7
	22	in m	0.2	0.3	0.6	1.0	0.3	0.5	0.9	0.3	0.4	0.7	1.1	0.2	0.3	0.6	0.9	0.2	0.4	0.7	0.9	0.2	0.4	0.6	0.8	0.2	0.3	0.5	0.8	0.9
	Residual vel m/s		1.2	0.9	0.6	0.5	1.0	0.7	0.6	1.3	0.8	0.6	0.4	1.5	0.9	0.7	0.5	1.0	0.8	0.6	0.4	2.5	1.6	1.3	0.9	1.3	1.1	0.7	0.6	0.5
9	5	Drop	0.2	0.3	0.5	0.8	0.2	0.4	0.7	0.2	0.3	0.6	0.9	0.2	0.2	0.5	0.7	0.2	0.4	0.6	0.8	0.4	0.8	1.2	1.8	0.2	0.3	0.5	0.6	0.8
	11	or	0.3	0.5	1.0	1.7	0.5	0.8	1.4	0.4	0.6	1.1	1.8	0.3	0.5	1.0	1.4	0.4	0.7	1.5	1.7	0.8	1.5	2.4	3.7	0.3	0.6	0.9	1.3	1.6
	16	rise	0.5	1.0	1.5	2.5	0.8	1.2	2.3	0.6	0.9	1.8	2.8	0.5	0.8	1.4	2.3	0.6	1.1	1.8	2.4	1.2	2.3	4.0	5.2	0.4	0.9	1.4	2.0	2.4
	22	in m	0.7	1.3	2.1	3.4	1.0	1.6	2.8	0.8	1.2	2.4	3.7	0.7	1.0	1.9	3.1	0.8	1.4	2.4	3.4	1.6	3.1	4.9	6.1	0.6	1.1	1.8	2.6	3.1
	Residual vel m/s		0.9	0.6	0.4	0.4	0.7	0.5	0.4	0.9	0.6	0.5	0.3	1.1	0.7	0.6	0.4	0.8	0.7	0.4	0.3	0.7	0.6	0.4	0.3	1.0	0.8	0.5	0.4	0.4
12	5	Drop	0.4	0.7	1.2	2.0	0.6	1.0	1.7	0.5	0.7	1.4	2.3	0.4	0.6	1.1	1.8	0.5	0.9	1.5	2.0	0.4	0.8	1.2	1.8	0.4	0.7	1.1	1.5	1.8
	11	or	0.8	1.5	2.3	4.0	1.2	1.9	3.4	1.0	1.4	2.8	4.6	0.8	1.2	2.2	3.4	1.0	1.0	3.1	4.0	0.8	1.5	2.4	3.7	0.7	1.3	2.2	3.1	3.7
	16	rise	1.4	2.3	3.7	6.1	1.7	2.9	5.5	1.4	2.2	4.0	6.4	1.2	1.7	3.4	5.5	1.5	1.1	4.6	6.1	1.2	2.3	4.0	5.2	1.1	1.9	3.4	4.6	5.8
	22	in m	1.7	3.0	4.6		2.3	3.7	6.4	2.0	2.9	5.5		1.6	2.3	4.3	6.4	1.9	1.5	6.1		1.6	3.1	4.9	6.1	1.4	2.5	4.3	5.8	
	Residual vel m/s		0.7	0.5	0.3	0.3	0.6	0.4	0.3	0.7	0.5	0.4	0.2	0.8	0.6	0.4	0.3	0.6	0.5	0.3	0.3	0.7	0.6	0.4	0.3	0.8	0.6	0.4	0.3	0.3
15	5	Drop	0.9	1.5	2.4	4.0	1.1	1.8	3.4	1.0	1.4	2.8	4.3	0.8	1.2	2.3	3.4	1.0	1.7	3.1	4.0	0.8	1.5	2.4	3.7	0.7	1.3	2.2	3.1	3.7
	11	or	1.5	3.1	4.6	7.0	2.3	3.7	6.1	1.9	2.9	5.2	8.2	1.6	2.3	4	6.4	1.9	1.7	5.8	7.6	1.6	2.9	4.9	6.1	1.4	2.2	4.3	6.1	6.7
	16	rise	2.6	4.3	6.4		3.4	5.5		1.5	4.8	7.9		2.4	3.7	6.4		2.9	2.5			2.4	4.6	7.0		2.1	4.0	6.1		
	22	in m	3.4	5.8			4.6	6.7		3.7	5.5	9.8		3.1	4.9	7.6		3.7	3.4			3.1	5.5	8.9		2.8	5.2	8.2		
	Residual vel m/s		0.6	0.4	0.3	0.2	0.5	0.4	0.3	0.6	0.4	0.3	0.2	0.7	0.5	0.4	0.3	0.6	0.4	0.3	0.2	0.6	0.5	0.3	0.3	0.7	0.5	0.4	0.3	0.2

Selection Example	**Size S4**
Flow Rate	- 610 l/s
Required Throw @ 0.5m/s Vt	- 15m
Static Pressure Loss (Pa)	- 100pa
Noise Level	- 41dB(A)

Using Discharge Correction Table

11°C ΔT gives 2.2m drop/rise

Cooling 11°C - Cylinder setting up 9°

Heating 11°C - Cylinder setting down 9°

Dimensions & Weights

CJD Diffuser (S)

ANGLE° LIMITS (CORE):

MINIMUM ANGLE = -30°

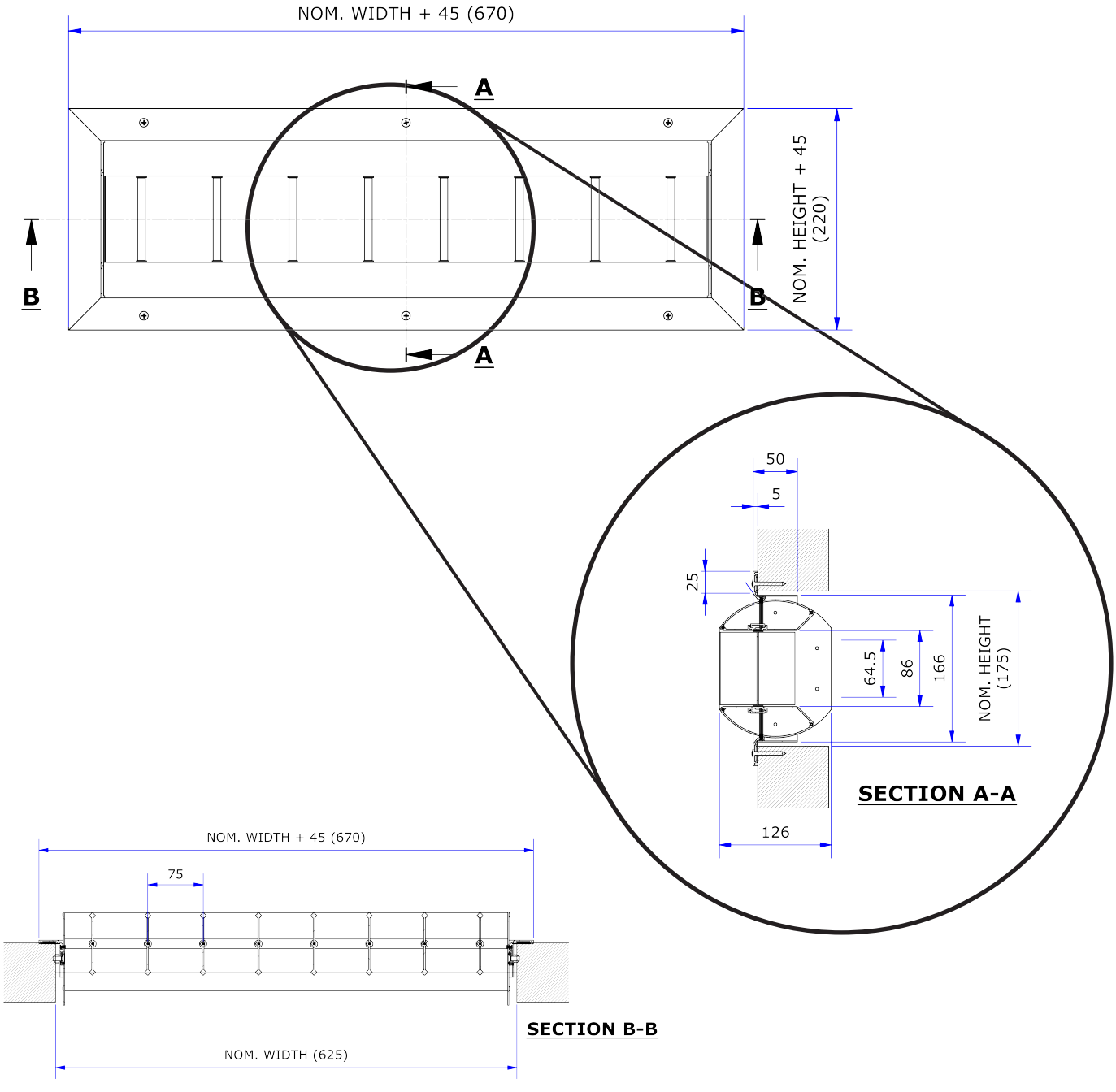
MAXIMUM ANGLE = 30°

ANGLE° LIMITS (VANE):

MINIMUM ANGLE = -60°

MAXIMUM ANGLE = 60°

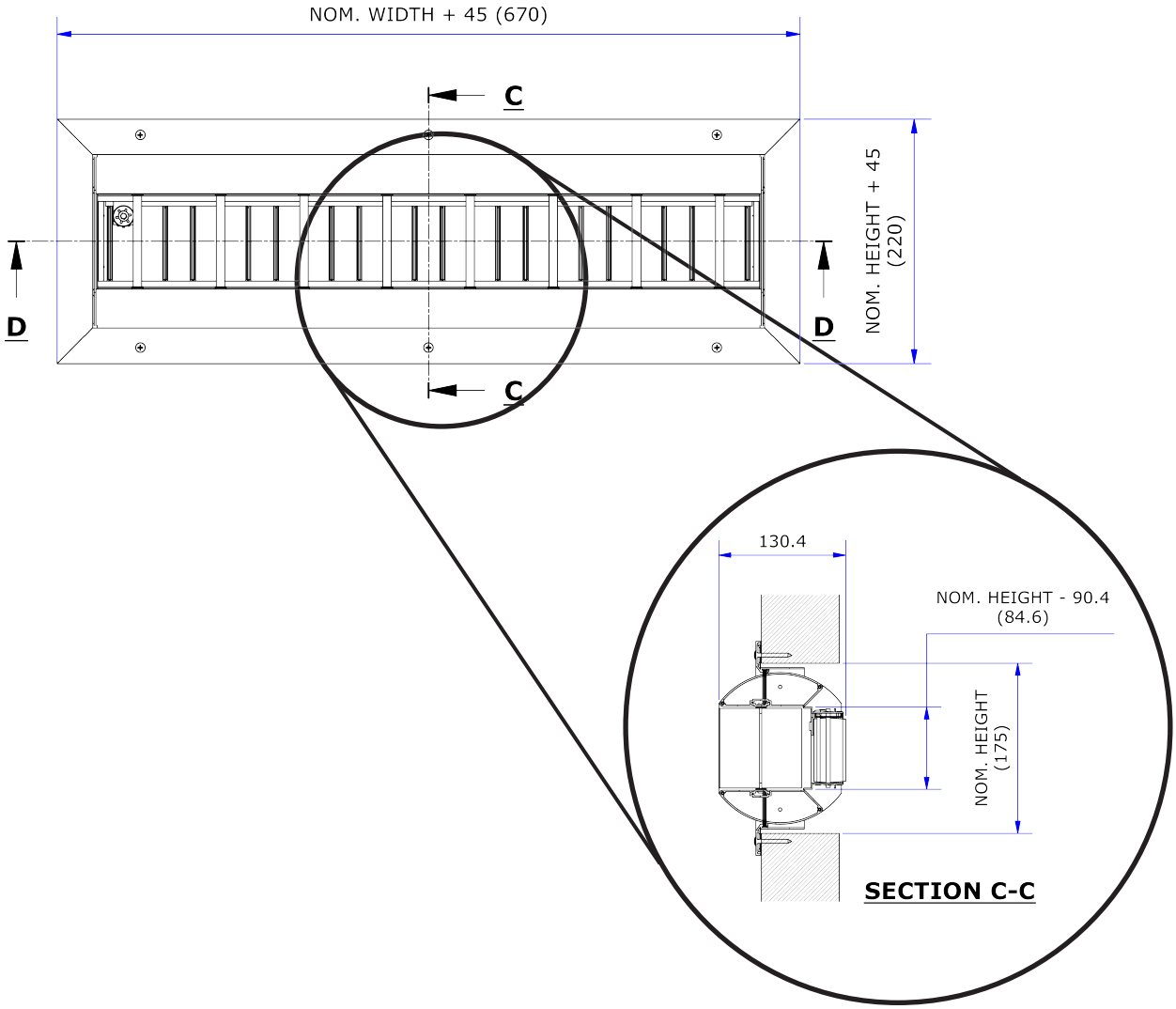
Type	Size	Nominal Width	Nominal Height	Vanes QTY	Weights (Kg)
S	1	250	175	3	1.175
S	2	325	175	4	1.458
S	3	475	175	6	2.023
S	4	625	175	8	2.588
S	9	175	175	2	0.892
S	10	400	175	5	1.740
S	11	550	175	7	2.305

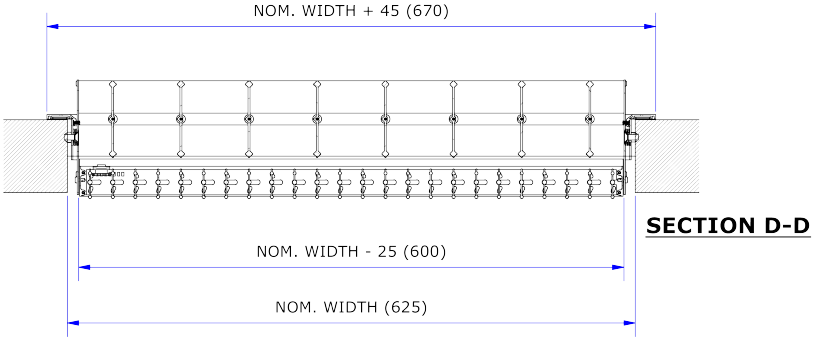


Dimensions & Weights

CJD Diffuser (S + OBSS)

Type	Size	Nominal Width	Nominal Height	Vanes QTY	Weights (Kg)
S	1	250	175	3	1.281
S	2	325	175	4	1.596
S	3	475	175	6	2.223
S	4	625	175	8	2.850
S	9	175	175	2	0.967
S	10	400	175	5	1.909
S	11	550	175	7	2.536





Dimensions & Weights

CJD Diffuser (L)

ANGLE° LIMITS (CORE):

MINIMUM ANGLE = -30°

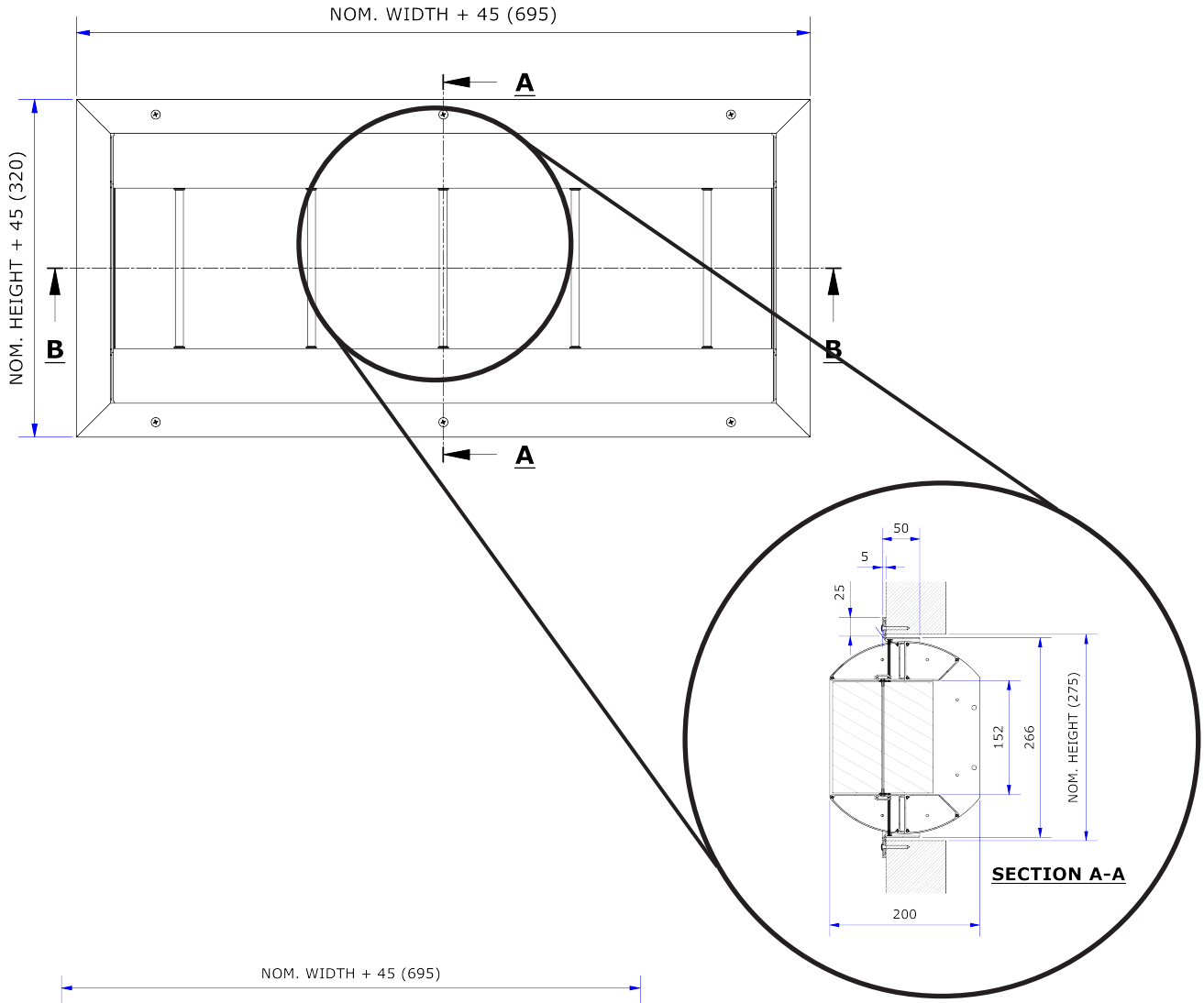
MAXIMUM ANGLE = 30°

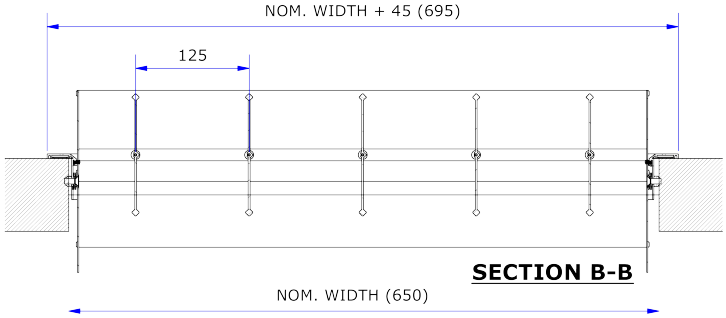
ANGLE° LIMITS (VANE):

MINIMUM ANGLE = -60°

MAXIMUM ANGLE = 60°

Type	Size	Nominal Width	Nominal Height	Vanes QTY	Weight (Kg)
L	5	525	275	4	3.817
L	6	650	275	5	4.609
L	7	775	275	6	5.401
L	8	900	275	7	6.193
L	12	1025	275	8	6.985

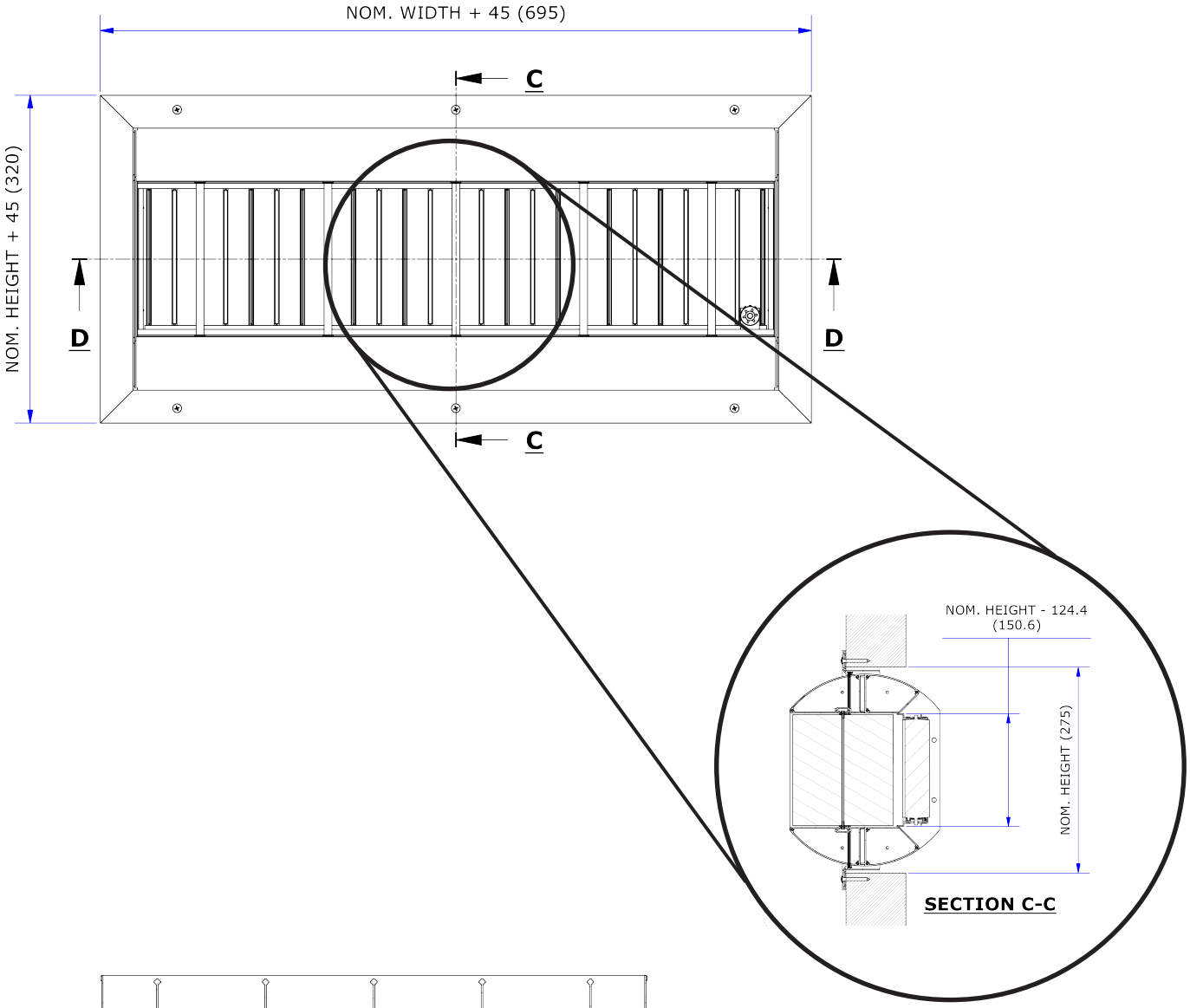


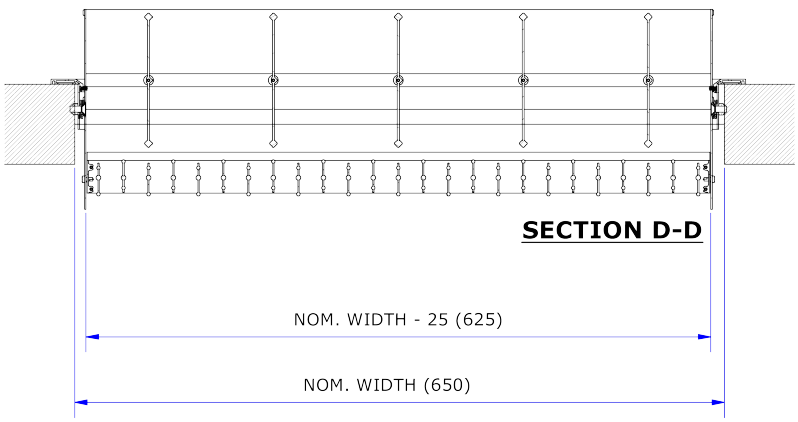


Dimensions & Weights

CJD Diffuser (L + OBSS)

Type	Size	Nominal Width	Nominal Height	Vanes QTY	Weight (Kg)
L	5	525	275	4	4.121
L	6	650	275	5	4.994
L	7	775	275	6	5.850
L	8	900	275	7	6.722
L	12	1025	275	8	7.578

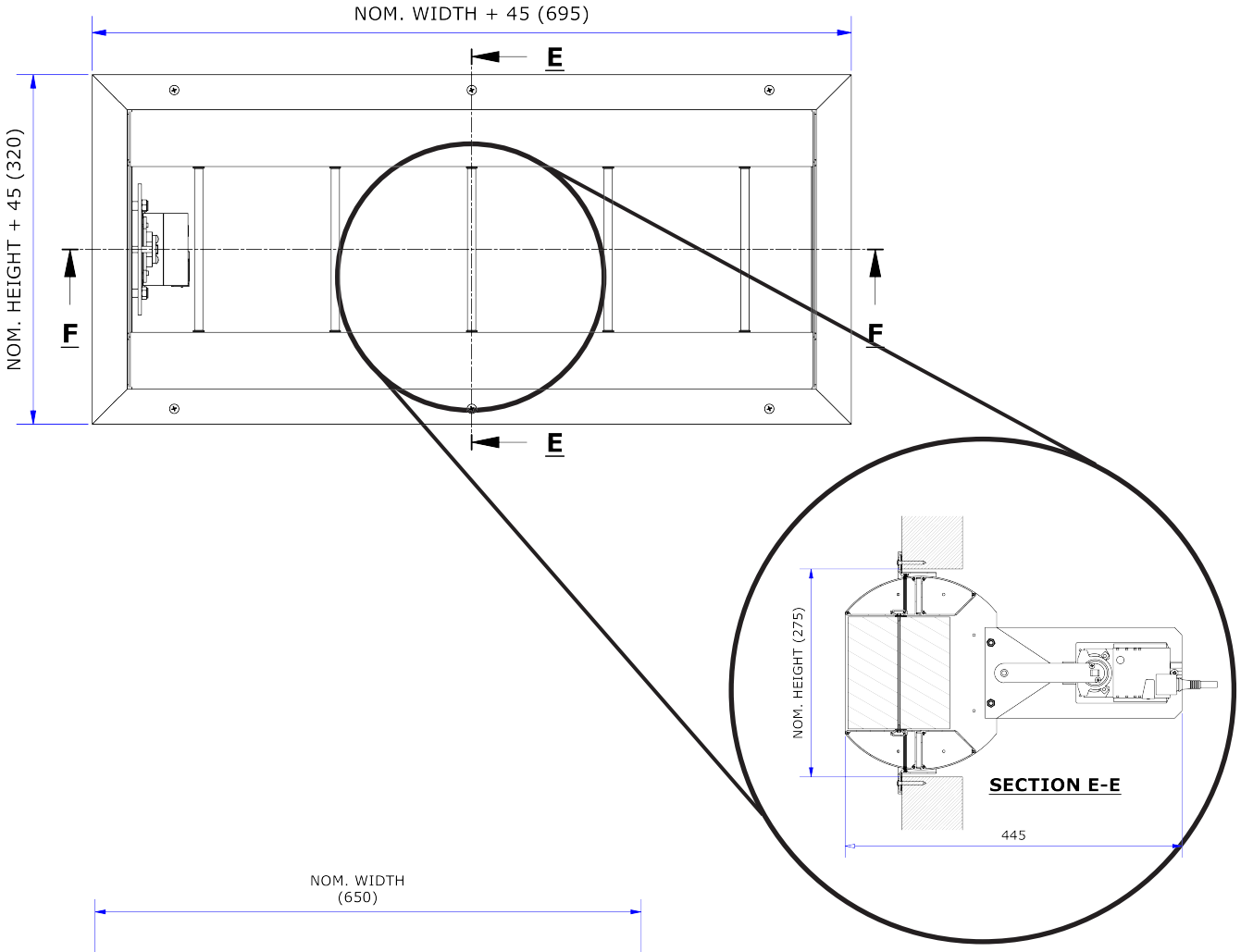


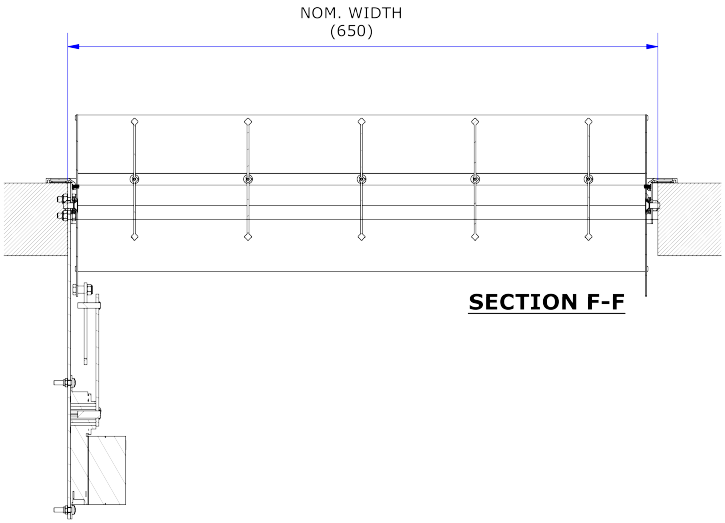


Dimensions & Weights

CJD/M Diffuser (L with Actuation)

Type	Size	Nominal Width	Nominal Height	Vanes QTY	Weight (Kg)
L	5	525	275	4	4.577
L	6	650	275	5	5.369
L	7	775	275	6	6.161
L	8	900	275	7	6.953
L	12	1025	275	8	7.745





Order Key

Composite Reference: CJD/0/SF/S4/9010/OBSS

Diffuser Order Key			1	2	3	4	5
Order example:		**CJD**	0	SF	S4	9010	OBSS
Motor:							
0							
M24V	24V DC Motor (only available for 275 height model)						
M230V	230V DC Motor (only available for 275 height model)						
Fixings:							
NF	No Fix						
SF	Screw Fixing						
Size:							
S1	250mm x 175mm						
S2	325mm x 175mm						
S3	475mm x 175mm						
S4	625mm x 175mm						
L5	525mm x 275mm						
L6	650mm x 275mm						
L7	775mm x 275mm						
L8	900mm x 275mm						
S9	175mm x 175mm						
S10	400mm x 175mm						
S11	550mm x 175mm						
L12	1025mm x 275mm						
Finish:							
9010	White 9010 Matt (20%) finish						
9005	Black 9005 Matt (30%) finish						
9006	Silver 9006 Matt (40%) finish						
9016	White 9016 Matt (20%) finish						
9003	White 9003 Matt (40%) finish						
SPC	Other colours available to special order						
Damper:							
	No damper						
OBSS	Opposed bladed damper						

Specification Example

- Aerodynamic design to give low energy loss, producing maximum throw with minimum air entrainment
- Adjustable vertical discharge angle (±30°)
- Adjustable guide vanes for air direction control and throw length reduction
- Aluminium construction
- Polypropylene seal
- Flanged frame for easy construction
- Aerodynamic testing carried out in general accordance to BS EN 12238:2001 (Ventilation for buildings - Air terminal devices - Aerodynamic testing and rating for mixed flow applications).
- Acoustic testing carried out in general accordance to BS EN ISO 5135:1999 acoustics. (Determination of sound power levels of noise from air-terminal devices, air-terminal units, dampers and valves by measurement in a reverberation room).
- Polyester powder coated to RAL9010 Matt (20%) finish, to all external surfaces.