

CMP-A – Ceiling Multi Pattern Diffuser (Aluminium)

Model: CMP-A Ceiling Multi Pattern – Aluminium

The Series CMP-A diffusers are a Louver Face Ceiling Diffuser of extruded aluminium construction, with removable core, available in a range of sizes and air distribution patterns, to suit numerous and varied requirements.

The Series CMP-A is a light weight alternative to the well established CMP-S louver face diffuser which has been an industry staple for many years.

Construction

Series CMP-A diffusers are ruggedly constructed entirely of aluminium, are lightweight and have no heavy cast, or moulded components. Precision combination corner gussets and braces keep mitres to a hairline and aluminium rivets hold the core components rigidly together, eliminating the possibility of warping, flexing, or rattling.

Panel diffusers (Type 2 on page 144D), are mechanically secured to steel panels with the Unique Holyoake mounting pins, eliminating gaps and producing a super-fine junction between panel and extrusion.

Installation

The diffusers frame assembly is installed in the ceiling opening and attached and sealed to the supply duct. The extensive range of cores, all snap in to the frame surrounds, with nickel plated spring steel thumb clips.

Finish

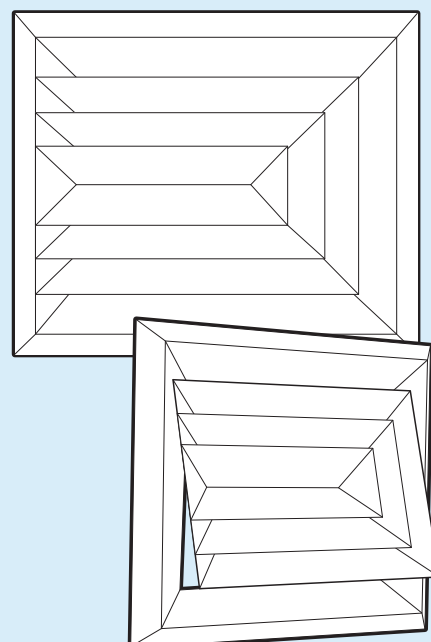
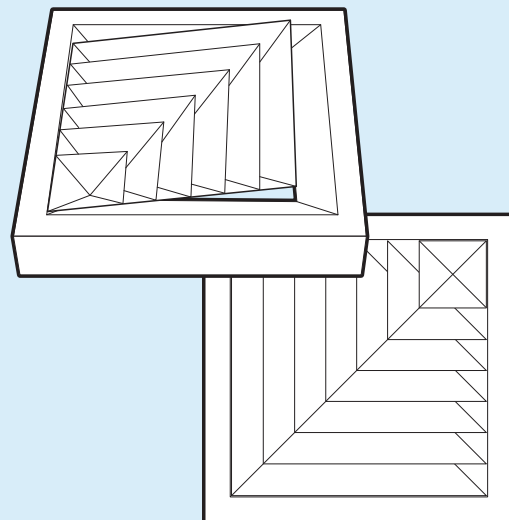
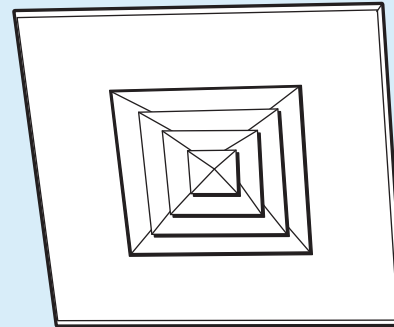
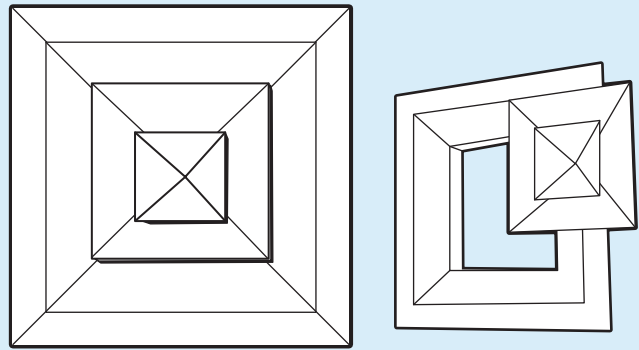
All Holyoake aluminium diffusers receive a three stage preparation, prior to final finishing; cleaning, chemical etch and drying. This preparation ensures powder coat adhesion and precludes powder peeling, or flaking after installation. Standard colour is Holyoake White.

Features

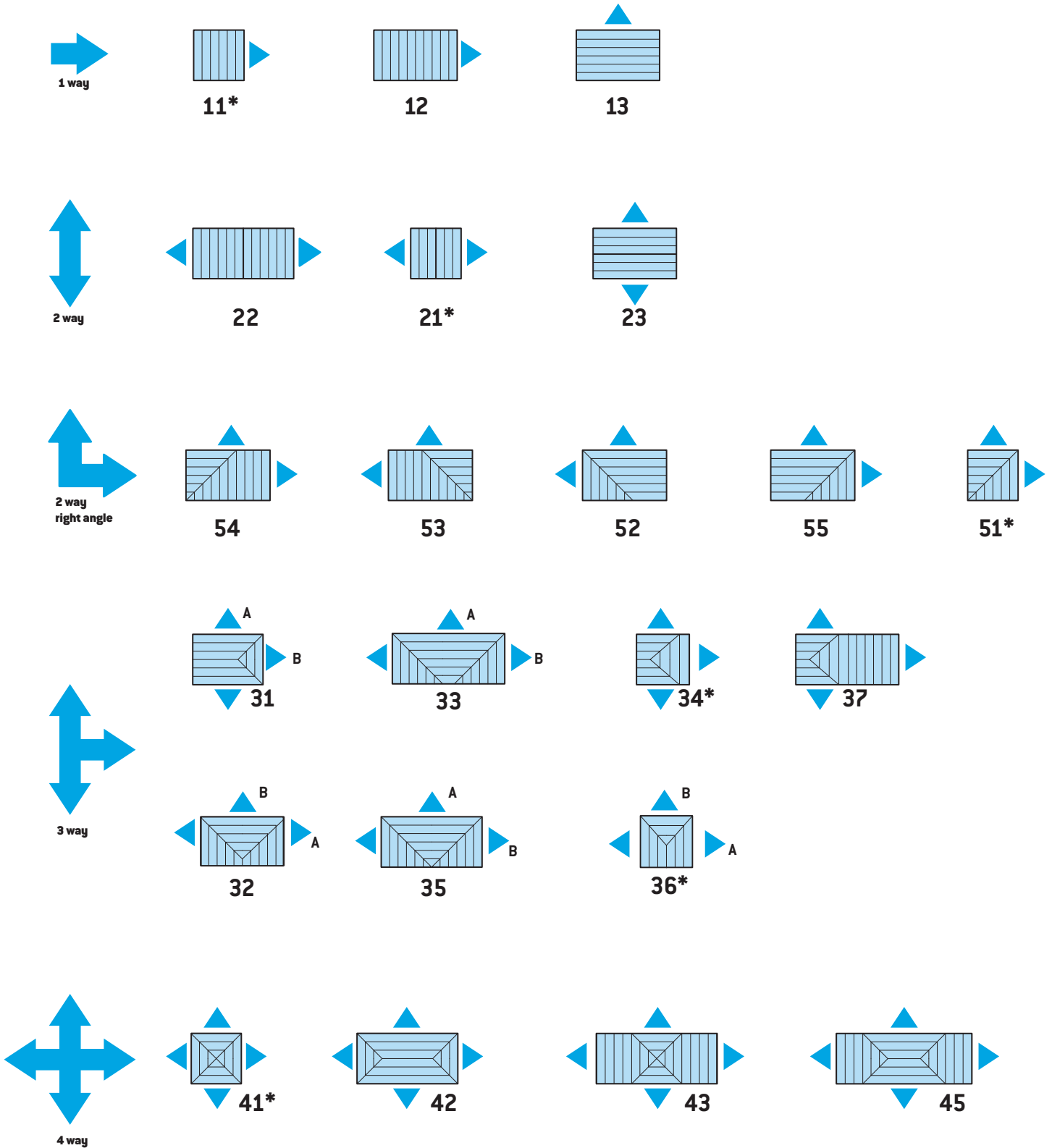
- All aluminium construction.
- Precision mitred corners.
- Selection of frame styles.
- Variety of throw patterns.
- Snap-in interchangeable cores.
- Tough powder coat finish.
- Lightweight Premi-Aire™ and galvanised cushion head boxes available.

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.

Ceiling Diffuser



Model: CMP and CMPH Core Styles



* Square core patterns.

Diffusers are only available in standard sizes as listed in performance data.

CMP-A – Ceiling Multi Pattern Diffuser (Aluminium)

Model: **CMP-A – Ceiling Multi Pattern Diffuser (Aluminium)**

Standard Flange Frame.

Designed for surface mounting on all types of ceilings, as well as lay-in ceiling tile applications.

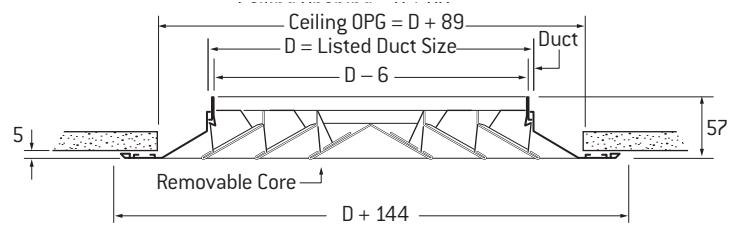
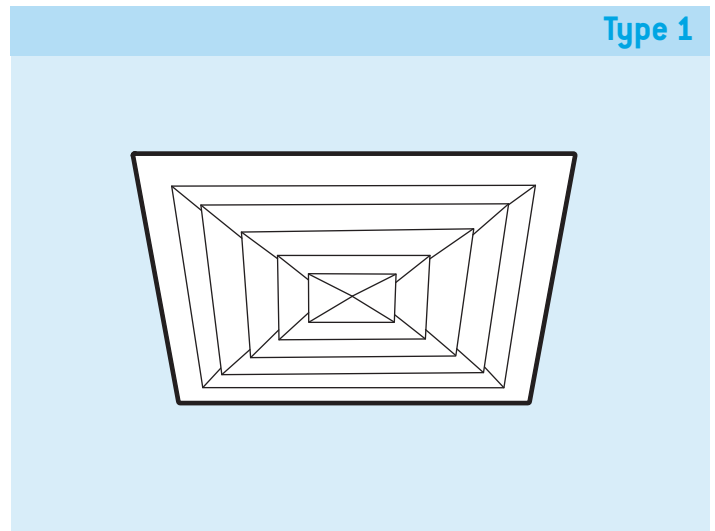
Construction

Aluminium:

0.75mm extruded 6063-T5 aluminium outer frame.

0.55mm removable aluminium core.

Note: A Steel construction CMP-S version may be available, please contact your local Holyoake branch.



Panel Diffuser.

Lay-in type for installation in suspended "T-Rail" type ceilings. Standard panel overall size is 595 x 595 to suit a 600 x 600 grid. Size 450 x 450 has an overall face size of 595 x 595. It therefore does not require a panel in a 600 grid and fits "T-Rail" spacing with clearance*.

Construction

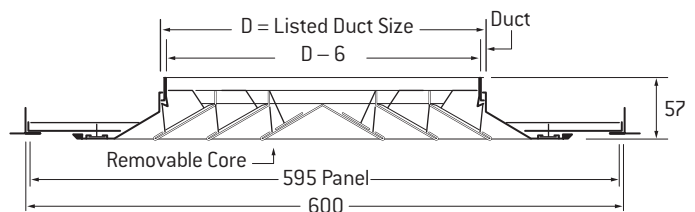
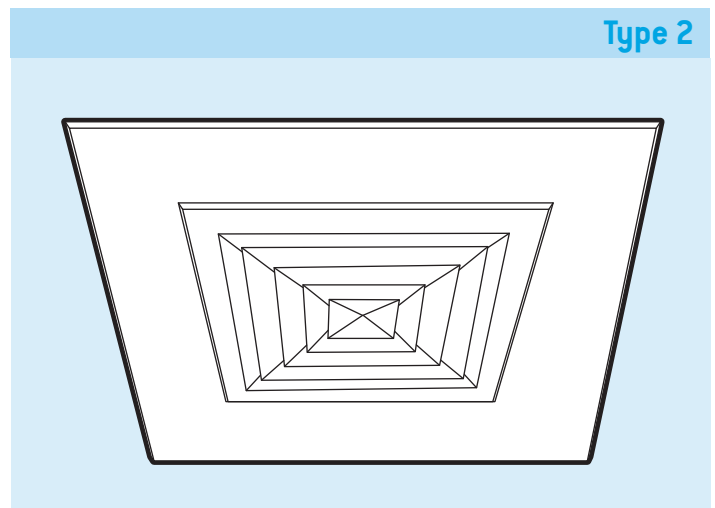
Aluminium:

0.75mm extruded 6063-T5 aluminium outer frame.

0.55mm removable aluminium core.

* Note: 0.75 mm Steel Panel on CMP-A Type 2.

Product weights are shown on page 150D.



Ceiling Multi Pattern Diffuser (Aluminium) – CMP-A

Model: **CMP-A – Ceiling Multi Pattern Diffuser (Aluminium)**

Drop Frame.

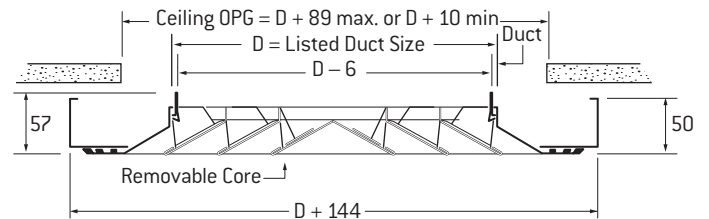
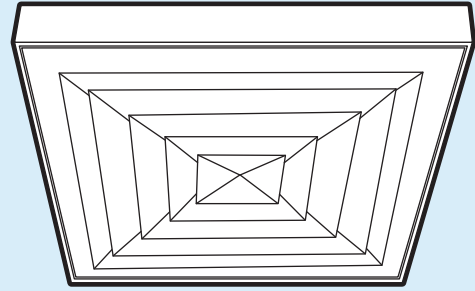
Lowers the face of the diffuser below the ceiling line. Can be used to reduce smudging, or against obstacles to minimise drafts. Can be supplied in any height from 50 - 81mm, but unless otherwise specified, frame height of 50 mm will be furnished. Special order only.

Construction

Aluminium:

0.75mm extruded 6063-T5 aluminium outer frame.
0.55mm removable aluminium core.

Type 3



Bevelled Drop Frame.

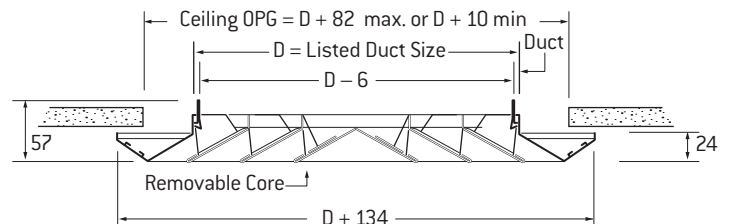
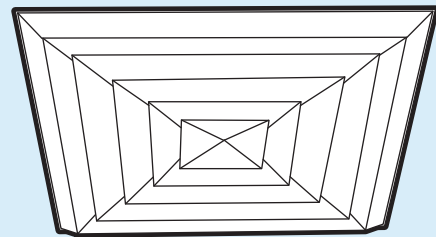
Smartly styled bevelled type surround reduces ceiling smudging. For all surface mounting applications. Special order only.

Construction

Aluminium:

0.75mm extruded 6063-T5 aluminium outer frame.
0.55mm removable aluminium core.
Product weights are shown on page 150D.

Type 4

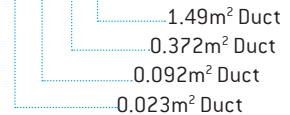


CMP – Octave Band Sound Data

Model: CMP Supply

Lp		OCTAVE BANDS, Lw					
NC	A-Scale	125	250	500*	1000	2000	4000
15	19	38-40-42-44	30-32-34-35	27-27-27-27	25-25-25-25	21-19-17-15	9-5 --
20	24	40-42-44-46	33-35-37-38	31-31-31-31	30-30-30-30	27-25-23-21	17-13-9-
25	29	43-45-47-49	37-39-41-42	35-35-35-35	35-35-35-35	32-30-28-26	24-20-16-11
30	34	46-48-50-52	40-42-44-45	40-40-40-40	39-39-39-39	37-35-33-31	31-27-23-18
35	39	49-51-53-55	44-46-48-49	44-44-44-44	44-44-44-44	42-40-38-36	38-34-30-25
40	44	52-54-56-58	48-50-52-53	48-48-48-48	49-49-49-49	47-45-43-41	45-41-37-32
45	49	55-57-59-61	51-53-55-56	53-53-53-53	54-54-54-54	52-50-48-46	51-47-43-38
50	54	58-60-62-64	55-57-59-60	57-57-57-57	59-59-59-59	57-55-53-51	56-52-48-43

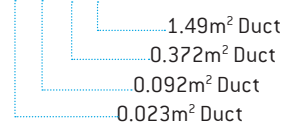
* Add 4dB for Aluminium Diffuser



Model: CMP Return

Lp		OCTAVE BANDS, Lw					
NC	A-Scale	125*	250	500	1000	2000	4000
15	18	24-29-34-40	26-27-28-29	25-26-27-28	25-25-25-25	22-22-22-21	18-17-16-16
20	23	28-33-38-44	30-31-32-33	29-30-31-32	30-30-30-30	27-27-27-26	24-23-22-22
25	28	33-38-43-49	35-36-37-38	34-35-36-37	35-35-35-35	32-32-31-30	29-28-27-27
30	33	37-42-47-53	39-40-41-42	38-39-40-41	39-39-39-39	37-37-36-35	35-34-33-33
35	38	41-46-51-57	43-44-45-46	42-43-44-45	44-44-44-44	42-42-41-40	41-40-39-39
40	43	46-51-56-62	48-49-50-51	47-48-49-50	49-49-49-49	47-46-45-44	46-45-44-44
45	48	50-55-60-66	52-53-54-55	51-52-53-54	54-54-54-54	52-51-50-49	51-51-50-50
50	53	54-59-64-70	56-57-58-59	55-56-57-58	59-59-59-59	57-56-55-54	56-56-55-55

* Subtract 9dB for Aluminium Diffuser



Notes on Sound Performance Data

The NC values are obtained from the performance tables on pages 148D to 157D, which are based on 8 dB room attenuation re 10^{-12} watts. The octave band dB values are sound power levels (Lw) re 10^{-12} watts. In the tables above, four values are shown for each octave band and NC value, with the first value for a duct area of 0.023m^2 , second 0.092m^2 , third 0.372m^2 and fourth for 1.49m^2 .

The A-scale dB values are based on a 8 dB room attenuation re 10^{-12} watts.

Lp - Sound pressure level, dB re 0.0002 microbars.

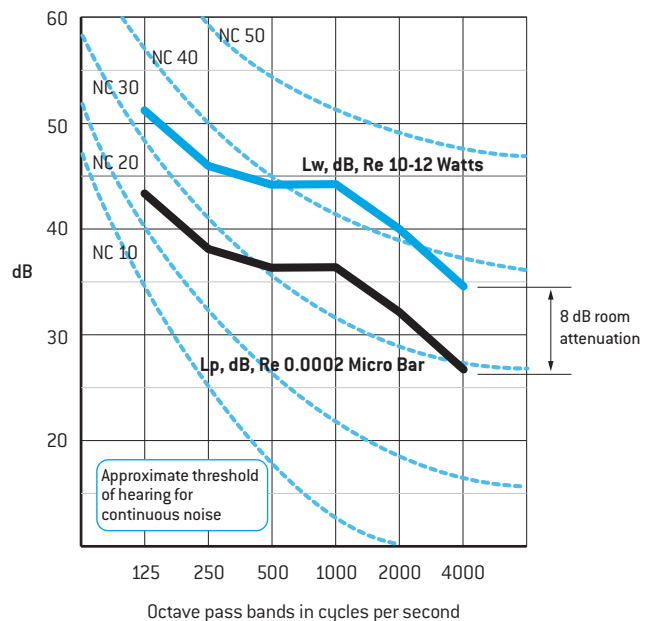
Lw - Sound power level, dB re 10^{-12} watts.

Example

A 300 x 300 CMP supplies $0.378\text{m}^3/\text{s}$. List the complete sound analysis for this condition. (A 300 x 300 CMP has a duct area of 0.090m^2).

The Performance Table on Page 148D shows that a 300 x 300 CMP supplying $0.378\text{m}^3/\text{s}$ satisfies an NC35. The CMP Supply table above lists the following A-scale and octave band sound levels for an NC35 and 0.092m^2 duct.

dB,	Lp	Octave Bands - dB, Lw					
NC	A	125	250	500	1000	2000	4000
35	39	51	46	44	44	40	34

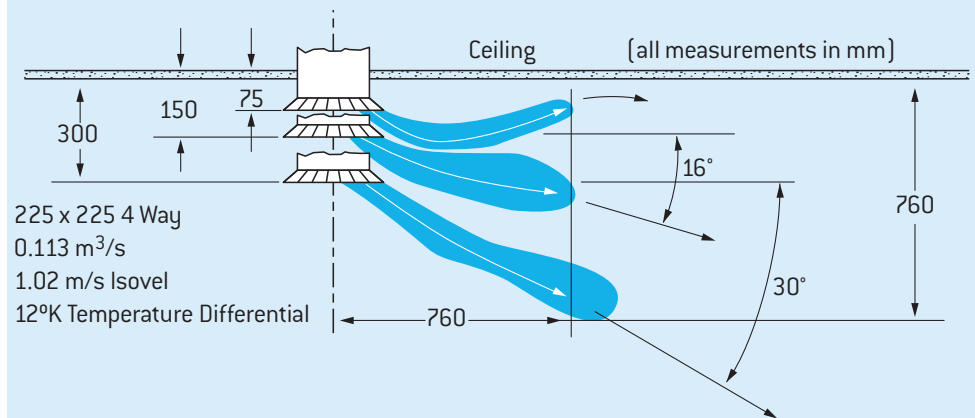


Above octave band sound power levels (Lw) plotted (top curve). The lower curve that satisfies an NC 35 was obtained by subtracting 8 dB (Room Attenuation) from each octave band sound power level.

Notes on Throw Performance Data

1. The CMP and CMPH Performance Data in the tables on the following pages (Pages 148D - 157D and 160D - 165D) applies when the outlet is mounted near the ceiling with ceiling effect.
2. Where no ceiling effect is present the horizontal throw will be about 25% less than shown in the tables.
3. The subsequent downward projection should be taken into account.

Effects of Mounting Position on Air Pattern



RECOMMENDED MAXIMUM AIR FLOW

Ceiling Height, m.	2.40	2.70	3.00	3.60	4.20	4.80
Air Flow (m³/s) per side	0.095	0.165	0.260	0.425	0.660	0.755

This data is based on 12°C Δt (temperature differential) during cooling.

General Performance Notes

1. Pressure:

All pressures are in Pa (N/m²)

TP = Total Pressure

-SP = Negative Static Pressure

2. Throw:

Maximum throws are to a terminal velocity of 0.25 m/s, middle to 0.5 m/s, and minimum to 0.75 m/s.

3. Sound:

The NC values are based on a room absorption of 8 dB, re 10⁻¹² watts and one steel diffuser. For aluminium diffusers, apply the following corrections to the listed data:

Supply:	NC = Listed + 3
	TP = Listed x 1.5
	THROW = Listed x 1.0
Return:	NC = Listed + 2
	-SP = Listed x 1.0

CMPH: Where table shows -, NC is below 20.

4. Return Factors:

If the unit is used as a return inlet, the performance data is obtained by applying the return factors shown on each table in the following manner:

a. Sound: Add the factor shown to the NC value listed.

b. Negative Static Pressure: Multiply the return factor by the total pressure listed.

Return Example:

150 x 150 CMP with 0.071 m³/s being returned through the unit.

Return NC = 20 + 1 = 21

Return Pressure (-SP) = TP x 1.1 = 25 (1.1) = 27.5 Pa (N/m²)

5. Size in mm:

This is the Diffuser Listed Duct Size or Nominal Neck Opening

























Symbols

m³/s	Cubic metres per second	Pt	Total pressure Pa (= Ps + Pv)
m/s	Metres per second	Δt	Temperature differential, room to supply
Vk	Outlet velocity, m/s	Throw	Distance air travels from diffuser to a given Vt. Tables show throws to Vts of 0.75 (min); 0.5 and 0.25 (max) m/s.
Vt	Air stream terminal velocity, m/s	NC	Noise criteria. Ratings are based on sound power level (SWL) re. 10 ⁻¹² watts minus 8 dB room attenuation in all frequency bands.
Ak	Diffuser or register net jet area, m²		
AD or An	Inlet duct or neck area		
Ps	Static pressure, Pa		
Pv	Velocity pressure, Pa		





















Note

All ceiling diffusers, seismic restraints are required, but not supplied.

CMP – Performance Data













Size in mm	Patterns	Neck Vel m/s TP Pa	1.57 6	2.10 11	2.62 18	3.15 25	3.67 35	4.19 45	4.72 57							
150 x 150	Return Factors	NC+1 -SP=1.1TP	Total m³/s NC		0.036 7	0.047 14	0.059 20	0.083 24	0.094 28	0.106 32						
			A	B	A	B	A	B	A	B						
	 41	m³/s side throw m	0.009 1.2 1.5 2.1		0.012 1.5 1.8 2.4		0.015 1.8 2.1 2.7		0.018 2.1 2.4 3.1		0.020 2.1 2.4 3.4		0.024 2.1 2.4 3.4		0.027 2.4 2.7 3.7	
	 36	m³/s side throw m	0.009 1.2 1.5 2.1	0.013 1.5 2.1 3.1	0.012 1.5 1.8 2.4	0.018 1.8 2.4 3.4	0.015 1.8 2.1 2.7	0.022 2.1 2.7 4.0	0.018 2.1 3.1 4.3	0.026 2.4 3.4 4.6	0.020 2.1 2.4 3.4	0.031 2.4 3.4 4.6	0.024 2.1 2.4 3.4	0.036 2.4 3.4 4.9	0.027 2.4 2.7 3.7	0.040 2.7 3.7 5.2
	 34 *	m³/s side throw m	0.018 1.8 2.4 3.1	0.009 1.2 1.5 2.4	0.024 2.1 2.7 3.7	0.012 1.5 1.8 2.7	0.029 2.4 3.1 4.3	0.015 1.8 2.1 3.1	0.036 2.7 3.4 4.6	0.018 1.8 2.1 3.4	0.041 2.7 3.7 4.9	0.021 2.1 2.4 3.7	0.047 3.1 4.0 5.2	0.024 2.1 2.4 3.4	0.053 3.4 4.3 5.5	0.027 2.4 2.7 4.3
	 21	m³/s side throw m	0.018 2.1 2.4 3.4		0.024 2.4 2.7 4.0		0.029 2.7 3.1 4.6		0.036 3.1 3.4 4.9		0.042 3.4 3.7 5.2		0.049 3.4 4.0 5.5		0.053 3.7 4.3 6.1	
	 51	m³/s side throw m	0.018 2.1 2.4 3.4		0.024 2.4 2.7 4.0		0.029 2.7 3.1 4.6		0.036 3.1 3.4 4.9		0.042 3.4 3.7 5.2		0.049 3.4 4.0 5.5		0.053 3.7 4.3 6.1	
	 11	m³/s side throw m	0.035 2.4 3.1 4.3		0.047 2.7 3.4 4.9		0.060 3.1 4.0 5.5		0.071 3.4 4.3 6.1		0.083 3.7 4.6 6.4		0.094 4.0 4.9 7.0		0.107 4.3 5.2 7.3	
	AD 0.023 m²															
	225 x 225	Return Factors	NC+3 -SP=1.3TP	Total m³/s NC		0.080 11	0.106 18	0.133 24	0.160 28	0.186 32	0.212 36					
			A	B	A	B	A	B	A	B	A	B	A	B		
 41		m³/s side throw m	0.020 1.5 1.8 2.7		0.026 1.8 2.1 3.1		0.033 2.1 2.4 3.4		0.040 2.4 2.7 3.7		0.046 2.4 2.7 4.0		0.053 2.4 3.1 4.3		0.059 2.7 3.4 4.6	
 36		m³/s side throw m	0.020 1.5 1.8 2.7	0.030 2.1 2.7 3.7	0.026 1.8 2.1 3.1	0.040 2.4 3.1 4.3	0.033 2.1 2.4 3.4	0.050 2.7 3.4 4.9	0.040 2.1 2.7 3.7	0.060 3.1 3.7 5.2	0.046 2.4 2.7 4.0	0.070 3.4 4.0 5.5	0.053 2.4 3.1 4.3	0.080 3.4 4.3 6.1	0.060 2.7 3.4 4.6	0.090 3.7 4.6 6.4
 34 *		m³/s side throw m	0.034 2.1 2.7 3.7	0.023 2.1 2.4 3.4	0.044 3.1 3.7 4.3	0.031 2.4 2.7 4.0	0.056 3.4 4.3 4.9	0.039 2.7 3.1 4.6	0.067 3.1 3.7 5.2	0.046 3.1 3.4 4.9	0.078 3.4 4.0 5.5	0.054 3.4 3.7 5.2	0.089 4.3 4.3 6.1	0.062 3.4 4.0 5.5	0.100 4.6 4.6 6.4	0.070 3.7 4.3 6.1
 21		m³/s side throw m	0.040 2.7 3.1 4.6		0.053 3.1 3.7 5.2		0.067 3.4 4.3 5.8		0.080 3.7 4.6 6.4		0.093 4.0 4.9 6.7		0.106 4.3 5.2 7.3		0.119 4.6 5.5 7.9	
 51		m³/s side throw m	0.040 2.7 3.1 4.6		0.053 3.1 3.7 5.2		0.067 3.4 4.3 5.8		0.080 3.7 4.6 6.4		0.093 4.0 4.9 6.7		0.106 4.3 5.2 7.3		0.119 4.6 5.5 7.9	
 11		m³/s side throw m	0.080 3.4 4.3 5.8		0.106 4.0 4.9 6.7		0.133 4.6 5.5 7.6		0.160 4.9 6.1 8.2		0.186 5.2 6.4 8.8		0.212 5.5 7.0 9.5		0.239 6.1 7.3 10.1	
AD 0.051 m²																
300 x 300		Return Factors	NC+5 -SP=1.4TP	Total m³/s NC		0.142 14	0.189 21	0.236 27	0.283 31	0.330 35	0.378 39					
			A	B	A	B	A	B	A	B	A	B	A	B		
	 41	m³/s side throw m	0.035 1.8 2.4 3.1		0.047 2.1 2.7 3.7		0.059 2.4 3.1 4.3		0.071 2.7 3.4 4.5		0.083 3.1 3.7 4.9		0.094 3.4 4.0 5.2		0.106 3.7 4.3 5.5	
	 36	m³/s side throw m	0.035 1.8 2.4 3.1	0.053 2.4 3.1 4.3	0.047 2.1 2.7 3.7	0.071 2.7 3.4 4.9	0.059 2.4 3.1 4.3	0.088 3.1 4.0 5.5	0.071 2.7 3.4 4.6	0.106 3.4 4.3 6.1	0.083 3.1 3.7 4.9	0.124 4.0 4.6 5.4	0.094 3.4 4.0 5.2	0.142 4.9 5.2 7.0	0.106 3.4 4.3 5.5	0.160 4.3 5.2 7.3
	 34 *	m³/s side throw m	0.053 2.4 3.1 4.3	0.044 2.4 3.1 4.3	0.071 3.1 3.4 4.9	0.059 2.7 3.4 4.9	0.088 3.1 4.0 5.5	0.074 3.1 4.0 5.5	0.106 3.4 4.3 6.1	0.088 3.4 4.3 6.1	0.124 4.0 4.6 6.4	0.103 3.7 4.6 6.4	0.142 4.0 4.9 7.0	0.118 4.0 4.9 7.0	0.160 4.3 5.2 7.3	0.133 4.3 5.2 7.3
	 21	m³/s side throw m	0.071 3.1 3.7 5.2		0.094 3.7 4.3 6.1		0.118 4.3 4.9 7.0		0.142 4.6 5.2 7.6		0.165 4.9 5.5 7.9		0.189 5.2 6.1 8.5		0.212 5.5 6.4 9.2	
	 51	m³/s side throw m	0.071 3.1 3.7 5.2		0.094 3.7 4.3 6.1		0.118 4.3 4.9 7.0		0.142 4.6 5.2 7.6		0.165 4.9 5.5 7.9		0.189 5.2 6.1 8.5		0.212 5.5 6.4 9.2	
	 11	m³/s side throw m	0.142 4.0 4.9 7.0		0.189 4.6 5.5 7.9		0.236 5.2 6.4 9.2		0.283 5.5 6.7 9.8		0.330 6.1 7.3 10.4		0.378 6.4 7.6 11.3		0.425 7.0 8.2 11.9	
	AD 0.090 m²															
	375 x 375	Return Factors	NC+5 -SP=1.9TP	Total m³/s NC		0.220 7	0.295 16	0.368 23	0.441 29	0.515 33	0.590 37	0.661 41				
			A	B	A	B	A	B	A	B	A	B				
 41		m³/s side throw m	0.055 2.1 2.7 3.7		0.074 2.4 3.1 4.3		0.092 2.7 3.4 4.9		0.110 3.1 3.7 5.2		0.129 3.4 4.0 5.5		0.147 3.4 4.3 6.1		0.165 3.7 4.6 6.4	
 36		m³/s side throw m	0.055 2.1 2.7 3.7	0.083 3.1 3.7 5.2	0.074 2.4 3.1 4.3	0.111 3.7 4.3 6.1	0.092 2.7 3.4 4.9	0.138 3.1 4.0 5.5	0.110 3.1 3.7 5.2	0.166 4.6 5.2 7.6	0.129 3.4 4.0 5.5	0.193 4.9 5.5 7.9	0.147 3.4 4.3 6.1	0.221 4.3 5.2 8.5	0.165 3.7 4.6 6.4	0.249 5.5 6.4 9.2
 34 *		m³/s side throw m	0.077 2.7 3.4 4.9	0.072 2.7 3.4 4.9	0.103 3.1 4.0 5.5	0.096 3.1 4.0 5.5	0.129 3.4 4.6 6.4	0.119 3.4 4.6 6.4	0.154 4.9 6.7 9.2	0.144 4.9 6.7 9.2	0.180 5.2 7.3 9.8	0.158 4.9 7.3 9.8	0.206 5.5 7.6 10.4	0.191 4.3 5.5 8.2	0.232 6.1 8.2 11.0	0.215 6.1 8.2 11.0
 21		m³/s side throw m	0.111 3.7 4.6 6.4		0.147 4.3 5.2 7.3		0.184 4.9 5.8 8.2		0.221 5.2 6.4 9.2		0.258 5.5 6.7 9.8		0.295 6.1 7.3 10.4		0.330 6.4 7.9 11.0	
 51		m³/s side throw m	0.111 3.7 4.6 6.4		0.147 4.3 5.2 7.3		0.184 4.9 5.8 8.2		0.221 5.2 6.4 9.2		0.258 5.5 6.7 9.8		0.295 6.1 7.3 10.4		0.330 6.4 7.9 11.0	
 11		m³/s side throw m	0.220 4.6 5.5 7.9		0.295 5.2 6.4 9.2		0.368 5.8 7.3 10.4		0.441 6.4 7.9 11.3		0.515 7.3 8.5 12.2		0.590 7.6 9.2 12.8		0.661 8.2 9.8 13.7	
AD 0.141 m²																

All ceiling diffusers, seismic restraints are required, but not supplied. * These cores are constructed to give as near as possible equal air flow in A & B directions.

Size in mm	Patterns	Neck Vel m/s TP Pa	1.57 6	2.10 11	2.62 18	3.15 25	3.67 35	4.19 45	4.72 57				
450 x 450	Return Factors	NC+7 -SP=2.2TP	Total m³/s NC		0.319 9	0.425 18	0.531 25	0.637 31	0.734 35	0.850 39	0.956 43		
		41	m³/s side throw m		0.079 2.4 3.1 4.3	0.106 2.7 3.4 4.9	0.132 3.1 4.0 5.5	0.159 3.4 4.3 6.1	0.188 3.7 4.6 6.4	0.212 4.0 4.9 7.0	0.238 4.3 5.2 7.3		
		36	m³/s side throw m		0.079 2.4 3.1 4.3	0.119 3.4 4.3 5.8	0.106 2.7 3.4 4.9	0.159 4.0 5.5 7.6	0.199 4.6 6.1 8.2	0.239 5.2 6.4 8.8	0.319 6.1 7.3 10.1		
		34 *	m³/s side throw m		0.106 3.4 4.3 5.8	0.106 3.4 4.3 5.8	0.142 4.0 4.9 6.7	0.142 4.0 4.9 6.7	0.177 4.6 5.5 7.6	0.177 4.9 6.1 8.3	0.212 5.2 6.4 8.8	0.248 5.2 6.4 8.8	
		21	m³/s side throw m		0.159 4.0 4.9 7.0	0.212 4.6 5.5 7.9	0.265 5.2 6.4 9.2	0.318 5.5 6.7 9.8	0.371 6.1 7.3 10.4	0.425 6.4 7.6 11.3	0.477 7.0 8.2 11.9		
		11	m³/s side throw m		0.319 4.9 6.1 8.5	0.425 5.8 7.0 9.8	0.531 6.7 7.9 11.3	0.638 7.0 8.5 11.9	0.743 7.6 9.2 12.8	0.850 8.2 10.1 13.7	0.956 8.8 10.7 14.6		
	AD 0.202 m²												
	525 x 525	Return Factors	NC+9 -SP=2.7TP	Total m³/s NC		0.433 11	0.578 20	0.722 27	0.866 33	1.010 37	1.157 41	1.298 45	
			41	m³/s side throw m		0.109 2.7 3.4 4.9	0.144 3.1 4.0 5.5	0.180 3.4 4.6 6.4	0.217 3.7 4.9 6.7	0.253 4.0 5.2 7.3	0.289 4.3 5.5 7.6	0.325 4.6 6.1 8.2	
			36	m³/s side throw m		0.109 2.7 3.4 4.9	0.163 3.7 4.6 6.4	0.144 3.1 4.0 5.5	0.217 3.7 4.9 6.7	0.325 4.0 5.2 7.3	0.379 5.5 6.7 9.8	0.423 6.1 7.3 10.4	
		34 *	m³/s side throw m		0.139 3.4 4.3 5.8	0.146 3.4 4.3 5.8	0.186 4.0 4.9 6.7	0.194 4.0 4.9 6.7	0.232 4.6 5.5 8.2	0.243 4.9 6.1 8.2	0.279 5.2 6.4 9.5	0.292 5.5 7.0 9.5	
		21	m³/s side throw m		0.216 4.6 5.5 7.9	0.289 5.2 6.4 9.2	0.361 5.8 7.3 10.4	0.433 6.4 7.9 11.3	0.505 6.7 8.5 12.2	0.578 7.3 9.2 12.8	0.649 7.9 9.8 13.7		
		11	m³/s side throw m		0.432 5.5 7.0 9.5	0.578 6.4 7.9 11.0	0.723 7.3 9.2 12.5	0.866 7.9 9.8 13.4	1.010 8.5 10.4 14.6	1.160 9.2 11.3 15.6	1.300 9.8 11.9 16.5		
AD 0.276 m²													
600 x 600		Return Factors	NC+9 -SP=2.83TP	Total m³/s NC		0.566 12	0.755 21	0.944 28	1.130 34	1.320 38	1.510 42	1.700 46	
			41	m³/s side throw m		0.142 3.1 3.7 5.2	0.189 3.7 4.3 6.1	0.236 4.3 4.9 7.0	0.283 4.6 5.2 7.6	0.330 4.9 5.5 7.9	0.378 5.2 6.1 8.5	0.425 5.5 6.4 9.2	
			36	m³/s side throw m		0.142 3.1 3.7 5.2	0.212 4.0 4.9 7.0	0.189 3.7 4.3 6.1	0.280 4.6 5.5 7.9	0.236 4.3 4.9 7.0	0.354 5.2 6.7 9.8	0.425 6.1 7.6 10.4	
		34 *	m³/s side throw m		0.213 4.0 4.9 7.0	0.177 3.7 4.6 6.4	0.283 4.6 5.5 7.9	0.236 4.3 5.2 8.2	0.354 5.5 6.7 9.8	0.425 6.1 7.3 10.4	0.510 7.0 8.2 11.0		
		21	m³/s side throw m		0.283 4.9 6.1 8.5	0.378 5.8 7.0 9.8	0.472 6.7 7.9 11.3	0.566 7.0 8.5 11.9	0.661 7.6 9.2 12.8	0.755 8.2 10.1 13.7	0.850 8.8 10.7 14.6		
		11	m³/s side throw m		0.566 6.1 7.3 10.7	0.755 7.0 8.5 12.2	0.944 7.9 9.8 14.0	1.130 8.5 10.4 14.9	1.320 9.2 11.3 16.2	1.510 9.8 12.2 17.1	1.700 10.7 12.8 18.3		
	AD 0.360 m²												
	750 x 750	Return Factors	NC+9 -SP=3.3TP	Total m³/s NC		0.885 15	1.180 24	1.480 31	1.770 37	2.070 41	2.360 45	2.660 49	
			41	m³/s side throw m		0.221 3.4 4.3 5.8	0.332 4.6 5.5 7.9	0.295 4.0 4.9 6.7	0.443 5.2 6.4 9.2	0.369 4.6 5.5 7.6	0.553 6.1 7.3 10.4	0.442 4.9 6.1 8.2	0.516 5.2 6.4 8.8
			36	m³/s side throw m		0.221 3.4 4.3 5.8	0.332 4.6 5.5 7.9	0.295 4.0 4.9 6.7	0.443 5.2 6.4 9.2	0.369 4.6 5.5 7.6	0.553 6.1 7.3 10.4	0.442 4.9 6.1 8.2	0.516 5.2 6.4 8.8
		34 *	m³/s side throw m		0.308 4.3 5.2 7.3	0.289 4.3 5.2 7.3	0.412 4.9 6.1 8.5	0.384 4.9 6.1 8.5	0.515 5.5 7.0 9.8	0.481 5.5 7.0 9.8	0.619 6.1 7.9 11.3	0.576 6.1 7.9 11.3	
		21	m³/s side throw m		0.442 5.5 7.0 9.5	0.590 6.4 7.9 11.0	0.737 7.3 9.2 12.5	0.885 7.9 9.8 13.4	1.030 8.5 10.4 14.6	1.180 9.2 11.3 15.6	1.330 9.8 11.9 16.5		
		11	m³/s side throw m		0.885 7.0 8.5 11.9	1.180 7.9 9.8 13.7	1.480 9.2 11.3 15.6	1.770 9.8 11.9 16.8	2.070 10.4 12.8 18.0	2.360 11.3 13.7 21.0	2.660 11.9 14.6 20.7		
AD 0.562 m²													

*These cores are constructed to give as near as possible equal air flow in A & B directions.

CMP – Performance Data

Size in mm	Patterns	Neck Vel m/s TP Pa	1.57 6	2.10 11	2.62 18	3.15 25	3.67 35	4.19 45	4.72 57			
900 x 900	Return Factors	NC+11 -SP=3.8TP	Total m³/s NC		1.270 16	1.700 25	2.120 32	2.550 38	2.970 42	3.400 46	3.820 50	
			A	B	A	B	A	B	A	B	A	B
		41	m³/s side throw m		0.319 3.7 4.6 6.4	0.425 4.3 5.2 7.3	0.531 4.9 5.8 8.2	0.637 5.2 6.4 9.2	0.743 5.5 6.7 9.8	0.850 6.1 7.3 10.4	0.956 6.4 7.9 11.0	
		36	m³/s side throw m		0.319 0.477 3.7 4.9 4.6 6.1 6.4 8.5	0.425 0.637 4.3 5.0 5.2 8.7 7.3 9.8	0.531 0.796 4.9 6.7 5.8 7.9 8.2 11.3	0.637 0.956 5.2 7.0 6.4 8.5 9.2 11.9	0.743 1.120 5.5 7.6 6.7 9.2 9.8 12.8	0.850 1.270 6.1 8.2 7.3 10.1 10.4 13.7	0.956 1.430 6.4 8.8 7.9 10.7 11.0 14.6	
		34 *	m³/s side throw m		0.425 0.425 0.2 4.9 6.1 6.1 8.5 8.5	0.566 0.566 5.8 5.8 7.0 7.0 9.8 9.8	0.708 0.708 6.7 6.7 7.9 7.9 11.3 11.3	0.850 0.850 7.0 7.0 8.5 8.5 11.9 11.9	0.991 0.991 7.6 7.6 9.2 9.2 12.8 12.8	1.130 1.130 8.2 8.2 10.1 10.1 13.7 13.7	1.270 1.270 8.8 8.8 10.7 10.7 14.6 14.6	
		21	m³/s side throw m		0.637 6.1 7.3 10.7	0.850 7.0 8.5 12.2	1.060 7.9 9.8 14.0	1.270 8.5 10.4 14.9	1.490 9.2 11.3 16.2	1.700 9.8 12.2 17.1	1.910 10.7 12.8 18.3	
		51	m³/s side throw m		1.270 7.6 9.2 13.1	1.700 8.8 10.7 15.3	2.120 10.1 12.2 17.4	2.550 11.0 13.1 18.6	2.970 11.6 14.0 20.1	3.400 12.5 14.9 21.7	3.820 13.4 16.2 22.9	
		11	m³/s side throw m		1.270 7.6 9.2 13.1	1.700 8.8 10.7 15.3	2.120 10.1 12.2 17.4	2.550 11.0 13.1 18.6	2.970 11.6 14.0 20.1	3.400 12.5 14.9 21.7	3.820 13.4 16.2 22.9	
	1200 x 1200	Return Factors	NC+14 -SP=4.5TP	Total m³/s NC		2.270 19	3.020 28	3.780 35	4.530 41	5.290 45	6.040 49	6.800 53
				A	B	A	B	A	B	A	B	A
		41	m³/s side throw m		0.566 4.6 5.5 7.9	0.755 5.2 6.4 9.2	0.944 5.8 7.3 10.4	1.130 6.4 7.9 11.3	1.320 6.7 8.5 12.2	1.510 7.3 9.2 12.8	1.700 7.9 9.8 13.7	
		36	m³/s side throw m		0.566 0.850 4.6 6.1 5.5 7.3 7.9 10.7	0.755 1.130 5.2 7.0 6.4 8.5 9.2 12.2	0.944 1.420 5.8 7.9 7.3 9.8 10.4 14.0	1.130 1.700 6.4 8.5 7.9 10.4 11.3 14.9	1.320 1.980 6.7 9.2 8.5 11.3 12.2 16.2	1.510 2.270 7.3 9.8 9.2 12.2 12.8 17.1	1.700 2.550 7.9 10.7 9.8 12.8 13.7 18.3	
		34 *	m³/s side throw m		0.779 0.743 5.8 5.8 7.3 7.3 10.1 10.1	1.040 0.991 6.7 6.7 8.2 8.2 11.6 11.6	1.300 1.240 7.6 7.6 9.5 9.5 13.1 13.1	1.560 1.440 8.2 8.2 10.1 10.1 14.3 14.3	1.820 1.740 8.8 8.8 11.0 11.0 15.3 15.3	2.080 1.980 9.5 9.5 11.6 11.6 16.5 16.5	2.340 2.230 10.1 10.1 12.5 12.5 17.4 17.4	
		21	m³/s side throw m		1.130 7.6 9.2 13.1	1.510 8.8 10.7 15.3	1.890 10.1 12.2 17.4	2.270 11.0 13.1 18.6	2.640 11.6 14.0 20.1	3.020 12.5 14.9 21.7	3.400 13.4 16.2 22.9	
		51	m³/s side throw m		2.270 9.2 11.3 15.9	3.020 10.7 13.1 18.3	3.780 12.2 14.9 20.7	4.530 13.1 16.2 22.6	5.290 14.0 17.4 24.1	6.040 14.9 18.6 25.9	6.800 16.2 19.8 27.5	
		11	m³/s side throw m		2.270 9.2 11.3 15.9	3.020 10.7 13.1 18.3	3.780 12.2 14.9 20.7	4.530 13.1 16.2 22.6	5.290 14.0 17.4 24.1	6.040 14.9 18.6 25.9	6.800 16.2 19.8 27.5	

*These cores are constructed to give as near as possible equal air flow in A & B directions.

Guide Product Weights				
Approximate Weight in Kg.				
Size	CMPA141	CMPA136	CMPA151	CMPA121
150 x 150	0.60	0.65	0.54	0.53
225 x 225	0.80	0.80	0.83	0.81
300 x 300	1.20	1.32	1.18	1.14
375 x 375	1.60	1.56	1.66	1.60
450 x 450	2.00	1.91	2.14	2.10

























Guide Product Weights				
Approximate Weight in Kg.				
Size	CMPA111	CMPA241	CMP-S	CMPS141
150 x 150	0.51	2.60	PANEL 595 SQ	1.00
225 x 225	0.79	2.70		1.50
300 x 300	1.13	2.70		1.90
375 x 375	1.56	2.70	2.00	2.98
450 x 450	2.03	2.70		3.40

Size in mm	Patterns		Neck Vel m/s	1.57	2.10	2.62	3.15	3.67	4.19	4.72										
				6	11	18	25	35	45	57										
150 x 225	Return Factors	NC+0 -SP=1.3 TP	Total m ³ /s NC	0.053	0.071	0.088	0.106	0.124	0.142	0.159										
				-		10		17		23		27		31		35				
AD 0.033 m ²		42		43	m ³ /s side throw m		0.017	0.008	0.023	0.011	0.029	0.015	0.035	0.017	0.041	0.021	0.047	0.024	0.053	0.026
					1.8	1.2	2.1	1.5	2.4	1.8	2.7	2.1	3.4	2.7	2.1	3.1	2.1	3.7	2.4	4.0
		31	m ³ /s side throw m		0.022	0.008	0.029	0.012	0.037	0.015	0.044	0.017	0.052	0.021	0.059	0.024	0.066	0.026		
			2.1	1.2	2.4	1.5	2.7	1.8	3.1	2.1	3.4	2.1	3.7	2.4	4.0	2.4	4.3	2.4	4.3	2.7
		33	m ³ /s side throw m		0.020	0.017	0.026	0.022	0.033	0.027	0.040	0.033	0.046	0.039	0.053	0.044	0.060	0.050		
			1.8	1.5	2.1	1.8	2.4	2.1	3.1	2.4	3.4	2.7	3.7	2.7	4.0	3.1	4.3	3.4	4.3	2.7
		37	m ³ /s side throw m		0.017	0.017	0.024	0.024	0.029	0.029	0.035	0.035	0.041	0.041	0.047	0.047	0.053	0.053		
			1.8	1.8	2.1	2.1	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3
		22, 23	m ³ /s side throw m		0.026	-	0.035	-	0.044	-	0.053	-	0.062	-	0.071	-	0.079	-		
			2.4	-	2.7	-	3.1	-	3.4	-	3.7	-	4.0	-	4.3	-	4.6	-		
	52, 54, 55	m ³ /s side throw m		0.035	0.017	0.047	0.024	0.059	0.029	0.071	0.035	0.083	0.044	0.094	0.047	0.106	0.053			
		2.4	1.8	2.7	2.1	3.1	2.4	3.4	2.7	4.0	3.4	4.6	3.7	4.9	4.0	5.2	4.3	6.4	3.4	
	12, 13	m ³ /s side throw m		0.053	-	0.071	-	0.088	-	0.106	-	0.124	-	0.142	-	0.159	-			
		3.1	-	3.7	-	4.3	-	4.8	-	5.2	-	5.5	-	6.1	-	6.4	-			
150 x 300	Return Factors	NC+2 -SP=1.7 TP	Total m ³ /s NC	0.071	0.094	0.118	0.142	0.165	0.189	0.212										
				-		11		18		24		28		32		36				
		42		43	m ³ /s side throw m		0.026	0.009	0.035	0.012	0.044	0.015	0.055	0.018	0.062	0.021	0.071	0.024	0.080	0.026
					2.4	1.2	2.7	1.5	3.1	1.8	3.4	1.8	3.7	2.1	4.0	2.1	4.3	2.1	4.6	2.4
		45 *	m ³ /s side throw m		0.018	0.018	0.024	0.024	0.029	0.029	0.035	0.035	0.041	0.041	0.047	0.047	0.053	0.053		
			2.1	2.1	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.6	4.6
		31	m ³ /s side throw m		0.031	0.009	0.041	0.012	0.052	0.015	0.062	0.018	0.072	0.020	0.083	0.024	0.093	0.026		
			2.4	1.2	2.7	1.5	3.1	1.8	3.4	1.8	3.7	2.1	4.0	2.1	4.3	2.4	4.6	2.4	4.9	2.4
		33	m ³ /s side throw m		0.035	0.018	0.047	0.024	0.060	0.029	0.071	0.035	0.083	0.041	0.094	0.047	0.107	0.053		
			1.8	1.8	2.1	2.1	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3
	37	m ³ /s side throw m		0.026	0.022	0.035	0.029	0.044	0.037	0.053	0.044	0.062	0.052	0.071	A59	0.080	0.066			
		2.4	2.1	2.7	2.4	3.1	2.7	3.4	3.1	4.0	3.4	4.3	3.7	4.6	4.0	5.2	4.3	6.4	3.7	
	22, 23	m ³ /s side throw m		0.035	-	0.047	-	0.059	-	0.071	-	0.083	-	0.094	-	0.106	-			
		2.4	-	2.7	-	3.1	-	3.4	-	4.0	-	4.3	-	4.6	-	4.9	-			
	52, 54, 55	m ³ /s side throw m		0.053	0.018	0.071	0.024	0.089	0.029	0.106	0.035	0.124	0.041	0.142	0.047	0.160	0.053			
		3.1	1.8	3.7	2.1	4.3	2.4	4.6	2.7	4.9	3.1	5.2	3.4	5.5	3.7	6.1	4.0	6.4	4.3	
	12, 13	m ³ /s side throw m		0.071	-	0.094	-	0.118	-	0.142	-	0.165	-	0.189	-	0.212	-			
		3.1	-	3.7	-	4.3	-	4.8	-	5.2	-	5.5	-	6.1	-	6.4	-			
150 x 375	Return Factors	NC+2 -SP=2.0 TP	Total m ³ /s NC	0.089	0.118	0.147	0.177	0.207	0.236	0.266										
				-		12		19		25		29		33		37				
		42		43	m ³ /s side throw m		0.035	0.009	0.047	0.012	0.059	0.015	0.071	0.018	0.083	0.021	0.094	0.024	0.106	0.026
					2.4	1.2	2.7	1.5	3.1	1.8	3.4	1.8	3.7	2.1	4.0	2.1	4.3	2.1	4.6	2.4
		45 *	m ³ /s side throw m		0.018	0.026	0.024	0.035	0.029	0.044	0.035	0.053	0.041	0.062	0.047	0.071	0.053	0.080		
			2.1	2.4	2.4	2.7	2.7	3.1	3.4	3.4	3.7	3.4	3.7	3.4	3.7	3.4	3.7	3.4	3.7	3.4
		31	m ³ /s side throw m		0.040	0.009	0.053	0.012	0.066	0.015	0.080	0.018	0.093	0.021	0.106	0.024	0.119	0.026		
			2.7	1.2	3.1	1.5	3.4	1.8	3.7	1.8	4.0	2.1	4.3	2.1	4.6	2.4	4.9	2.4	5.2	2.4
		33	m ³ /s side throw m		0.053	0.018	0.071	0.024	0.089	0.029	0.106	0.035	0.125	0.041	0.142	0.047	0.160	0.053		
			2.7	1.8	3.1	2.1	3.4	2.4	3.7	2.7	4.0	3.1	4.6	3.4	4.9	3.7	5.2	4.0	5.5	4.3
	37	m ³ /s side throw m		0.026	0.031	0.035	0.042	0.044	0.052	0.055	0.062	0.062	0.072	0.071	0.083	0.080	0.093			
		2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2
	22, 23	m ³ /s side throw m		0.044	-	0.059	-	0.074	-	0.088	-	0.103	-	0.118	-	0.133	-			
		2.7	-	3.1	-	3.4	-	3.7	-	4.0	-	4.3	-	4.6	-	4.9	-			
	52, 54, 55	m ³ /s side throw m		0.071	0.018	0.094	0.024	0.118	0.029	0.142	0.035	0.165	0.041	0.189	0.047	0.212	0.053			
		3.1	1.8	3.7	2.1	4.3	2.4	4.6	2.7	4.9	3.1	5.2	3.4	5.5	3.7	6.1	4.0	6.4	4.3	6.4
	12, 13	m ³ /s side throw m		0.089	-	0.118	-	0.147	-	0.177	-	0.207	-	0.236	-	0.266	-			
		3.4	-	4.0	-	4.6	-	5.2	-	5.5	-	6.1	-	6.4	-	7.0	-			

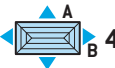







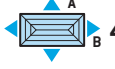
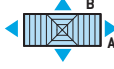

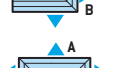



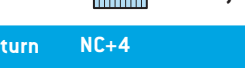

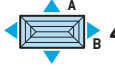



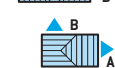




* These cores are constructed to give as near as possible equal air flow in A & B directions.

CMP – Performance Data

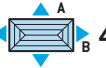
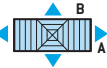
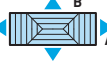
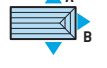


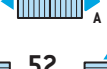



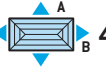
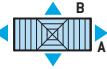
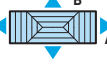
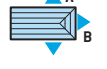


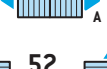



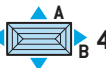
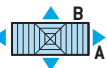
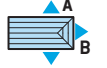






Diffusers - Ceiling Multi Pattern

Size in mm	Patterns		Neck Vel m/s	1.57	2.10	2.62	3.15	3.67	4.19	4.72						
	Return Factors	NC+3 -SP=2.8 TP	TP Pa	6	11	18	25	35	45	57						
150 x 450	 42  43  45 *  31  33  37  22, 23  52  54  55  53  12, 13	Total m ³ /s NC	0.106	0.142	0.177	0.212	0.248	0.283	0.319							
		m ³ /s side throw m	0.044	0.009	0.059	0.012	0.074	0.015	0.089	0.018	0.103	0.021	0.118	0.024	0.133	0.026
		m ³ /s side throw m	2.7	1.2	3.1	1.5	3.4	1.8	3.7	1.8	4	2.1	4.3	2.1	4.6	2.4
		m ³ /s side throw m	3.4	1.5	4	1.8	4.6	2.1	4.9	2.1	5.2	2.4	5.5	2.4	6.1	2.7
		m ³ /s side throw m	4.9	2.1	5.5	2.4	6.4	2.7	6.7	3.1	7.3	3.4	7.6	3.4	8.2	3.7
		m ³ /s side throw m	0.026	0.026	0.035	0.035	0.044	0.044	0.053	0.053	0.062	0.062	0.071	0.071	0.080	0.080
		m ³ /s side throw m	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3
		m ³ /s side throw m	3.1	3.1	3.4	3.4	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2
		m ³ /s side throw m	4.0	4.0	4.6	4.6	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0
		m ³ /s side throw m	0.049	0.009	0.065	0.012	0.081	0.015	0.097	0.018	0.113	0.021	0.130	0.024	0.146	0.026
m ³ /s side throw m	2.7	1.2	3.1	1.5	3.4	1.8	3.7	1.8	4.0	2.1	4.3	2.1	4.6	2.4		
m ³ /s side throw m	3.4	1.5	4.0	1.8	4.6	2.1	4.9	2.1	5.2	2.4	5.5	2.4	6.1	2.7		
m ³ /s side throw m	4.9	2.1	5.5	2.4	6.4	2.7	6.7	3.1	7.3	3.4	7.6	3.4	8.2	3.7		
m ³ /s side throw m	0.071	0.018	0.094	0.024	0.119	0.029	0.142	0.035	0.166	0.041	0.189	0.047	0.213	0.053		
m ³ /s side throw m	3.1	1.8	3.7	2.1	4.3	2.4	4.6	2.7	4.9	2.7	5.2	3.1	5.5	3.4		
m ³ /s side throw m	3.7	2.4	4.3	2.7	4.9	3.1	5.2	3.4	5.5	3.7	6.1	4.0	6.4	4.3		
m ³ /s side throw m	5.2	3.1	6.1	3.7	7.0	4.3	7.6	4.6	7.9	4.9	8.5	5.2	9.2	5.5		
m ³ /s side throw m	0.035	0.035	0.047	0.047	0.059	0.059	0.071	0.071	0.083	0.083	0.094	0.094	0.106	0.106		
m ³ /s side throw m	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3		
m ³ /s side throw m	3.1	3.1	3.4	3.4	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2		
m ³ /s side throw m	4.3	4.3	4.9	4.9	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0	7.3	7.3		
m ³ /s side throw m	0.053		0.071		0.088		0.106		0.124		0.142		0.159			
m ³ /s side throw m	3.1		3.7		4.3		4.6		4.9		5.2		5.5			
m ³ /s side throw m	3.7		4.3		4.9		5.2		5.5		6.1		6.4			
m ³ /s side throw m	5.2		6.1		7.0		7.6		7.9		8.5		9.2			
m ³ /s side throw m	0.088	0.018	0.118	0.024	0.148	0.029	0.177	0.035	0.207	0.041	0.236	0.047	0.266	0.053		
m ³ /s side throw m	3.4	1.8	4.0	2.1	4.6	2.4	4.9	2.7	5.2	2.7	5.5	3.1	6.1	3.4		
m ³ /s side throw m	4.3	2.4	4.9	2.7	5.5	3.1	6.1	3.4	6.4	3.7	7.0	4.0	7.3	4.3		
m ³ /s side throw m	5.8	3.1	6.7	3.7	7.6	4.3	8.2	4.6	8.8	4.9	9.5	5.2	10.1	5.5		
m ³ /s side throw m	0.106		0.142		0.177		0.212		0.248		0.283		0.319			
m ³ /s side throw m	3.7		4.3		4.9		5.2		5.5		6.1		6.4			
m ³ /s side throw m	4.6		5.2		5.8		6.4		6.7		7.3		7.9			
m ³ /s side throw m	6.4		7.3		8.2		9.2		9.8		10.4		11.0			
150 x 525	 42  43  45 *  31  33  37  22, 23  52  54  55  53  12, 13	Total m ³ /s NC	0.124	0.165	0.206	0.248	0.289	0.330	0.372							
		m ³ /s side throw m	0.053	0.009	0.071	0.012	0.088	0.015	0.106	0.018	0.124	0.021	0.142	0.024	0.159	0.026
		m ³ /s side throw m	3.1	1.2	3.7	1.5	4.3	1.8	4.6	1.8	4.9	2.1	5.2	2.1	5.5	2.4
		m ³ /s side throw m	3.7	1.5	4.3	1.8	4.9	2.1	5.2	2.1	5.5	2.4	6.1	2.4	6.4	2.7
		m ³ /s side throw m	5.2	2.1	6.1	2.4	7.0	2.7	7.6	3.1	7.9	3.4	8.5	3.4	9.2	3.7
		m ³ /s side throw m	0.026	0.035	0.035	0.047	0.044	0.059	0.053	0.071	0.062	0.083	0.071	0.094	0.080	0.106
		m ³ /s side throw m	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3
		m ³ /s side throw m	3.1	3.1	3.4	3.4	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2
		m ³ /s side throw m	4.0	4.3	4.6	4.9	5.2	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0	7.3
		m ³ /s side throw m	0.058	0.009	0.077	0.012	0.096	0.015	0.115	0.018	0.134	0.021	0.153	0.024	0.172	0.026
m ³ /s side throw m	3.1	1.2	3.7	1.5	4.3	1.8	4.6	1.8	4.9	2.1	5.2	2.1	5.5	2.4		
m ³ /s side throw m	3.7	1.5	4.3	1.8	4.9	2.1	5.2	2.1	5.5	2.4	6.1	2.4	6.4	2.7		
m ³ /s side throw m	5.2	2.1	6.1	2.4	7.0	2.7	7.6	3.1	7.9	3.4	8.5	3.4	9.2	3.7		
m ³ /s side throw m	0.088	0.018	0.118	0.024	0.148	0.029	0.177	0.035	0.207	0.041	0.236	0.047	0.266	0.053		
m ³ /s side throw m	3.4	1.8	4.0	2.1	4.6	2.4	4.9	2.7	5.2	2.7	5.5	3.1	6.1	3.4		
m ³ /s side throw m	4.3	2.4	4.9	2.7	5.5	3.1	6.1	3.4	6.4	3.7	7.0	4.0	7.3	4.3		
m ³ /s side throw m	5.8	3.1	6.7	3.7	7.6	4.3	8.2	4.6	8.8	4.9	9.5	5.2	10.1	5.5		
m ³ /s side throw m	0.044	0.040	0.059	0.053	0.074	0.066	0.088	0.079	0.103	0.093	0.118	0.106	0.133	0.119		
m ³ /s side throw m	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.6	4.6		
m ³ /s side throw m	3.4	3.1	4.0	3.7	4.6	4.3	4.9	4.6	5.2	4.9	5.5	5.2	6.1	5.5		
m ³ /s side throw m	4.9	4.6	5.5	5.2	6.4	5.8	6.7	6.4	7.3	6.7	7.6	7.3	8.2	7.9		
m ³ /s side throw m	0.062		0.083		0.103		0.124		0.144		0.165		0.186			
m ³ /s side throw m	3.1		3.7		4.3		4.6		4.9		5.2		5.5			
m ³ /s side throw m	3.7		4.3		4.9		5.2		5.5		6.1		6.4			
m ³ /s side throw m	5.2		6.1		7.0		7.6		7.9		8.5		9.2			
m ³ /s side throw m	0.106	0.018	0.142	0.024	0.177	0.029	0.212	0.035	0.248	0.041	0.283	0.047	0.319	0.053		
m ³ /s side throw m	3.7	1.8	4.3	2.1	4.9	2.4	5.2	2.7	5.5	2.7	6.1	3.1	6.4	3.4		
m ³ /s side throw m	4.6	2.4	5.2	2.7	5.8	3.1	6.4	3.4	6.7	3.7	7.3	4.0	7.9	4.3		
m ³ /s side throw m	6.4	3.1	7.3	3.7	8.2	4.3	9.2	4.6	9.8	4.9	10.1	5.2	11.0	5.5		
m ³ /s side throw m	0.124		0.165		0.206		0.248		0.289		0.330		0.372			
m ³ /s side throw m	3.7		4.3		4.9		5.2		5.5		6.1		6.4			
m ³ /s side throw m	4.6		5.2		5.8		6.4		6.7		7.3		7.9			
m ³ /s side throw m	6.4		7.3		8.2		9.2		9.8		10.4		11.0			

* These cores are constructed to give as near as possible equal air flow in A & B directions.

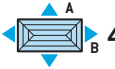
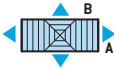


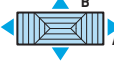



Size in mm	Patterns		Neck Vel m/s TP Pa	1.57	2.10	2.62	3.15	3.67	4.19	4.72												
	Return Factors	NC+5 -SP=4.1 TP		6	11	18	25	35	45	57												
225 x 300	 42  43  31  33  37  22, 23  52 55 54 53  12, 13	Total m ³ /s NC	0.106	0.142	0.177	0.212	0.248	0.283	0.319													
					A	B	A	B	A	B	A	B										
			AD 0.068 m ²			m ³ /s side throw m	0.033	0.020	0.044	0.026	0.055	0.033	0.067	0.040	0.077	0.046	0.089	0.053	0.100	0.060		
						m ³ /s side throw m	2.1	1.5	2.4	1.8	2.7	2.1	3.1	2.1	3.4	2.4	4.0	2.4	3.4	2.4	3.7	2.7
						m ³ /s side throw m	2.7	1.8	3.1	2.1	3.4	2.4	3.7	2.7	4	2.7	4	2.7	4.3	3.1	4.6	3.4
						m ³ /s side throw m	3.7	2.7	4.3	3.1	4.9	3.4	5.2	3.7	5.5	4	5.5	4	6.1	4.3	6.4	4.6
						m ³ /s side throw m	0.043	0.020	0.057	0.033	0.072	0.033	0.086	0.040	0.101	0.046	0.115	0.053	0.129	0.060	0.106	0.060
						m ³ /s side throw m	2.7	1.5	3.1	1.8	3.4	2.1	3.7	2.1	4.0	2.4	4.3	2.4	4.6	2.4	4.6	2.7
						m ³ /s side throw m	3.4	1.8	4.0	2.1	4.6	2.4	4.9	2.7	5.2	2.7	5.5	3.1	6.1	3.4	6.1	3.4
						m ³ /s side throw m	4.9	2.7	5.5	3.1	6.4	3.4	6.7	3.7	7.3	4.0	7.6	4.3	8.2	4.6	8.2	4.6
m ³ /s side throw m	0.035	0.035				0.047	0.047	0.059	0.059	0.071	0.071	0.083	0.083	0.094	0.094	0.106	0.106	0.106	0.106			
m ³ /s side throw m	2.4	2.4				2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.3	4.3			
AD 0.084 m ²			m ³ /s side throw m	0.033	0.036	0.044	0.049	0.055	0.060	0.067	0.073	0.077	0.085	0.089	0.097	0.100	0.109					
			m ³ /s side throw m	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	4.0	4.0	4.3	4.3	4.3	4.3	4.3				
			m ³ /s side throw m	3.1	3.1	3.4	3.4	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.5				
			m ³ /s side throw m	4.0	4.0	4.6	4.6	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0	7.0				
			m ³ /s side throw m	0.053	0.071	0.089	0.089	0.111	0.067	0.133	0.080	0.155	0.093	0.177	0.106	0.199	0.119					
			m ³ /s side throw m	3.1	3.7	4.3	4.3	4.3	3.1	4.6	4.9	4.9	5.2	5.5	5.5	5.5	5.5	5.5				
			m ³ /s side throw m	3.7	4.3	4.9	4.9	4.9	4.0	5.2	5.5	5.5	5.5	6.1	6.1	6.4	6.4	6.4				
			m ³ /s side throw m	5.2	6.1	7.0	7.0	7.0	7.0	7.6	7.6	7.9	7.9	8.5	8.5	8.5	8.5	8.5				
			m ³ /s side throw m	0.067	0.040	0.089	0.055	0.111	0.067	0.133	0.080	0.155	0.093	0.177	0.106	0.199	0.119					
			m ³ /s side throw m	3.1	2.4	3.7	2.7	4.3	3.1	4.6	3.4	4.9	3.7	5.2	4.0	5.5	4.3	5.5				
AD 0.101 m ²			m ³ /s side throw m	3.7	3.1	4.3	3.4	4.9	4.0	5.2	4.3	5.5	4.6	6.1	4.9	6.4	5.2					
			m ³ /s side throw m	5.2	4.0	6.1	4.6	7.0	5.2	7.6	5.5	8.2	6.1	8.5	6.4	9.2	7.0					
			m ³ /s side throw m	0.106	0.142	0.177	0.177	0.222	0.122	0.266	0.212	0.243	0.283	0.283	0.319	0.319	0.319					
			m ³ /s side throw m	3.7	4.3	4.9	4.9	4.9	4.0	5.2	5.5	5.5	6.1	6.1	6.4	6.4	6.4					
			m ³ /s side throw m	4.6	5.2	5.8	5.8	5.8	5.8	6.4	6.4	6.7	6.7	7.3	7.3	7.9	7.9					
			m ³ /s side throw m	6.4	7.3	8.2	8.2	8.2	8.2	9.2	9.2	9.8	9.8	10.4	10.4	11.0	11.0					
			m ³ /s side throw m	0.133	0.177	0.222	0.222	0.266	0.266	0.310	0.310	0.354	0.354	0.400	0.400	0.400	0.400					
			m ³ /s side throw m	3.1	3.7	4.3	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.5	5.5	5.5					
			m ³ /s side throw m	3.7	4.3	4.9	4.9	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4					
			m ³ /s side throw m	5.2	6.1	7.0	7.0	7.0	7.6	7.6	7.9	7.9	8.5	8.5	8.5	8.5	8.5					
225 x 375	 42  43  45 *  31  33  37  22, 23  52 55 54 53  12, 13 <td rowspan="10">Total m³/s NC</td> <td>0.133</td> <td>0.177</td> <td>0.222</td> <td>0.266</td> <td>0.310</td> <td>0.354</td> <td>0.400</td>	Total m ³ /s NC	0.133	0.177	0.222	0.266	0.310	0.354	0.400													
					A	B	A	B	A	B	A	B	A	B								
			AD 0.084 m ²			m ³ /s side throw m	0.046	0.020	0.062	0.026	0.079	0.033	0.094	0.040	0.109	0.046	0.124	0.053	0.140	0.060		
						m ³ /s side throw m	2.7	1.5	3.1	1.8	3.4	2.1	3.7	2.1	4.0	2.4	4.3	2.4	4.6	2.7	4.6	
						m ³ /s side throw m	3.4	1.8	4.0	2.1	4.6	2.4	4.9	2.7	5.2	2.7	5.5	3.1	6.1	3.4	6.1	
						m ³ /s side throw m	4.9	2.7	5.5	3.1	6.4	3.4	6.7	3.7	7.3	4.0	7.6	4.3	8.2	4.6	8.2	
						m ³ /s side throw m	0.033	0.033	0.044	0.044	0.055	0.055	0.067	0.067	0.077	0.077	0.089	0.089	0.100	0.100	0.100	
						m ³ /s side throw m	2.4	2.4	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.3	
						m ³ /s side throw m	3.1	3.1	3.4	3.4	4.0	4.0	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.2	
						m ³ /s side throw m	4.3	4.3	4.9	4.9	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0	7.3	7.3	7.3	
m ³ /s side throw m	0.057	0.020				0.075	0.026	0.094	0.033	0.113	0.040	0.132	0.046	0.151	0.053	0.169	0.060					
m ³ /s side throw m	3.1	1.5				3.7	1.8	4.3	2.1	4.6	2.1	4.9	2.4	5.2	2.4	5.5	2.7	5.5				
m ³ /s side throw m	3.7	1.8	4.3	2.1	4.9	2.4	5.2	2.7	5.5	2.7	6.1	3.1	6.4	3.4	6.4							
m ³ /s side throw m	5.2	2.7	6.1	3.1	7.0	3.4	7.6	3.7	7.9	4.0	8.5	4.3	9.2	4.6								
m ³ /s side throw m	0.039	0.055	0.052	0.073	0.065	0.093	0.078	0.110	0.091	0.128	0.103	0.147	0.117	0.166								
m ³ /s side throw m	2.7	2.1	3.1	2.4	3.4	2.7	3.7	3.1	4.0	3.4	4.3	3.4	4.6	3.7	4.6							
m ³ /s side throw m	3.1	2.7	3.7	3.1	4.3	3.4	4.6	3.7	4.9	4.0	5.2	4.3	5.5	4.6	5.5							
m ³ /s side throw m	4.6	3.7	5.2	4.3	5.8	4.9	6.4	5.2	6.7	5.5	7.3	6.1	7.9	6.4	7.9							
m ³ /s side throw m	0.046	0.043	0.061	0.058	0.076	0.072	0.092	0.086	0.107	0.100	0.123	0.115	0.138	0.129								
m ³ /s side throw m	2.7	2.7	3.1	3.1	3.4	3.4	3.7	3.7	4.0	4.0	4.3	4.3	4.6	4.6	4.6							
m ³ /s side throw m	3.4	3.4	4.0	4.0	4.6	4.6	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.1							
m ³ /s side throw m	4.9	4.9	5.5	5.5	6.4	6.4	6.7	6.7	7.3	7.3	7.6	7.6	8.2	8.2	8.2							
m ³ /s side throw m	0.066	0.088	0.111	0.111	0.133	0.133	0.155	0.155	0.177	0.177	0.199	0.199	0.221	0.221								
m ³ /s side throw m	3.1	3.7	4.3	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.5	5.5	5.5								
m ³ /s side throw m	3.7	4.3	4.9	4.9	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4								
m ³ /s side throw m	5.2	6.1	7.0	7.0	7.0	7.6	7.6	7.9	7.9	8.5	8.5	8.5	8.5	8.5								
m ³ /s side throw m	0.093	0.040	0.124	0.053	0.155	0.067	0.186	0.080	0.217	0.093	0.248	0.106	0.279	0.119								
m ³ /s side throw m	3.4	2.4	4.0	2.7	4.6	3.1	4.9	3.4	5.2	3.7	5.5	4.0	6.1	4.3	6.1							
m ³ /s side throw m	4.3	3.1	4.9	3.4	5.5	4.0	6.1	4.3	6.4	4.6	7.0	4.9	7.3	5.2								
m ³ /s side throw m	5.8	4.0	6.7	4.6	7.6	5.2	8.2	5.5	8.8	6.1	9.5	6.4	10.1	7.0								
m ³ /s side throw m	0.133	0.177	0.222	0.222	0.266	0.266	0.310	0.310	0.354	0.354	0.400	0.400	0.400	0.400								
m ³ /s side throw m	4.0	4.6	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0	7.0	7.0								
m ³ /s side throw m	4.9	5.5	6.4	6.4	6.4	6.7	6.7	7.3	7.3	7.6	7.6	8.2	8.2	8.2								
m ³ /s side throw m	7.0	7.9	8.2	8.2	8.2	8.2	8.8	8.8	9.8	9.8	10.4	10.4	11.0	11.0								
225 x 450	 42  43  45 *  31  33  37  22, 23  52 55 54 53  12, 13 <td rowspan="10">Total m³/s NC</td> <td>0.159</td> <td>0.212</td> <td>0.265</td> <td>0.319</td> <td>0.372</td> <td>0.425</td> <td>0.478</td>	Total m ³ /s NC	0.159	0.212	0.265	0.319	0.372	0.425	0.478													
					A	B	A	B	A	B	A	B	A	B								
			AD 0.101 m ²			m ³ /s side throw m	0.060															

CMP – Performance Data

Size in mm	Patterns		Neck Vel m/s TP Pa	1.57	2.10	2.62	3.15	3.67	4.19	4.72									
	Return	NC+5		Total m ³ /s	6	11	18	25	35	45	57								
225 x 525	Factors	-SP=2.6 TP	NC	0.186	0.247	0.309	0.371	0.433	0.496	0.557									
						15	22	28	32	36	40								
						A	B	A	B	A	B	A	B						
				AD 0.118 m ²	 42  43	 45 *	 31	 33	 37	 22, 23	 52  54 53	 12, 13	m ³ /s side throw m	0.073 0.020 0.097 0.026 0.122 0.033 0.146 0.040 0.170 0.046 0.195 0.053 0.219 0.060	3.4 1.5 4 1.8 4.6 2.1 4.9 2.1 5.2 2.4 5.5 2.4 6.1 2.7	4.3 1.8 4.9 2.1 5.5 2.4 6.1 2.7 6.4 2.7 7.0 3.1 7.3 3.4	5.8 2.7 6.7 3.1 7.6 3.4 8.2 3.7 8.8 4 9.5 4.3 10.1 4.6		
													m ³ /s side throw m	0.046 0.046 0.062 0.062 0.077 0.077 0.093 0.093 0.108 0.108 0.123 0.123 0.139 0.139	2.7 2.7 3.1 3.1 3.4 3.4 3.7 3.7 4.0 4.0 4.3 4.3 4.6 4.6	3.4 3.4 4.0 4.0 4.6 4.6 4.9 4.9 5.2 5.2 5.5 5.5 6.1 6.1	4.9 4.9 5.5 5.5 6.4 6.4 6.7 6.7 7.3 7.3 7.6 7.6 8.2 8.2		
													m ³ /s side throw m	0.083 0.020 0.111 0.026 0.138 0.033 0.166 0.040 0.194 0.046 0.221 0.053 0.249 0.060	3.4 1.5 4.0 1.8 4.6 2.1 4.9 2.1 5.2 2.4 5.5 2.4 6.1 2.7	4.3 1.8 4.9 2.1 5.5 2.4 6.1 2.7 6.4 2.7 7.0 3.1 7.3 3.4	5.8 2.7 6.7 3.1 7.6 3.4 8.2 3.7 8.8 4.0 9.5 4.3 10.1 4.6		
													m ³ /s side throw m	0.106 0.040 0.142 0.053 0.177 0.067 0.212 0.080 0.247 0.093 0.282 0.106 0.318 0.119	3.7 2.4 4.3 2.7 4.9 3.1 5.2 3.4 5.5 3.7 6.1 4.0 6.4 4.3	4.6 3.1 5.2 3.4 5.8 4.0 6.4 4.3 6.7 4.6 7.3 4.9 7.9 5.2	6.4 4.0 7.3 4.6 8.2 5.2 9.2 5.5 9.8 6.1 10.4 6.4 11.0 7.0		
													m ³ /s side throw m	0.060 0.063 0.080 0.083 0.100 0.105 0.119 0.126 0.139 0.147 0.159 0.168 0.179 0.188	3.1 3.1 3.7 3.7 4.3 4.3 4.6 4.6 4.9 4.9 5.2 5.2 5.5 5.5	3.7 3.7 4.3 4.3 4.9 4.9 5.2 5.2 5.5 5.5 6.1 6.1 6.4 6.4	5.2 5.2 6.1 6.1 7.0 7.0 7.6 7.6 7.9 7.9 8.5 8.5 9.2 9.2		
													m ³ /s side throw m	0.093 0.124 0.154 0.186 0.216 0.248 0.279	3.4 4.0 4.6 4.9 5.2 5.5 6.1	4.3 4.9 5.5 6.1 6.4 6.7 7.3	5.8 6.7 7.6 8.2 8.8 9.5 10.1		
													m ³ /s side throw m	0.145 0.040 0.195 0.053 0.243 0.067 0.291 0.080 0.340 0.093 0.389 0.106 0.438 0.119	4.0 2.4 4.6 2.7 5.2 3.1 5.5 3.4 6.1 3.7 6.4 4.0 7.0 4.3	4.9 3.1 5.5 3.4 6.4 4.0 6.7 4.3 7.3 4.6 7.6 4.9 8.2 5.2	7.0 4.0 7.9 4.6 9.2 5.5 10.4 6.1 11.3 6.4 11.9 7.0 12.8 7.0		
m ³ /s side throw m	0.186 0.247 0.309 0.371 0.433 0.496 0.557	4.3 4.9 5.5 6.1 6.4 6.7 7.3	5.2 6.1 7.0 7.6 8.2 8.8 9.5										7.3 8.5 9.8 10.4 11.3 12.2 12.8						
225 x 600	Return Factors	NC+5 -SP=3.0 TP	NC										0.212	0.283	0.354	0.425	0.496	0.566	0.637
						16	23	29	33	37	41								
						A	B	A	B	A	B	A	B						
				AD 0.135 m ²	 42  43	 45 *	 31	 33	 37	 22, 23	 52  54 53	 12, 13	m ³ /s side throw m	0.086 0.020 0.115 0.026 0.144 0.033 0.173 0.040 0.202 0.046 0.230 0.053 0.259 0.060	3.4 1.5 4.0 1.8 4.6 2.1 4.9 2.1 5.2 2.4 5.5 2.4 6.1 2.7	4.3 1.8 4.9 2.1 5.5 2.4 6.1 2.7 6.4 2.7 7.0 3.1 7.3 3.4	5.8 2.7 6.7 3.1 7.6 3.4 8.2 3.7 8.8 4.0 9.5 4.3 10.1 4.6		
													m ³ /s side throw m	0.047 0.060 0.062 0.080 0.077 0.100 0.093 0.119 0.109 0.139 0.124 0.159 0.140 0.179	2.7 3.1 3.1 3.7 3.4 4.3 3.7 4.6 4.0 4.9 4.3 5.2 4.6 5.5	3.4 3.7 4.0 4.3 4.6 4.9 4.9 5.2 5.2 5.5 5.5 6.1 6.1 6.4	4.9 5.2 5.5 6.1 6.4 7.0 6.7 7.6 7.3 7.9 7.6 8.5 8.2 9.2		
													m ³ /s side throw m	0.096 0.020 0.128 0.026 0.161 0.033 0.193 0.040 0.225 0.046 0.257 0.053 0.286 0.060	3.4 1.5 4.0 1.8 4.6 2.1 4.9 2.1 5.2 2.4 5.5 2.4 6.1 2.7	4.3 1.8 4.9 2.1 5.5 2.4 6.1 2.7 6.4 2.7 7.0 3.1 7.3 3.4	5.8 2.7 6.7 3.1 7.6 3.4 8.2 3.7 8.8 4.0 9.5 4.3 10.1 4.6		
													m ³ /s side throw m	0.133 0.040 0.178 0.053 0.221 0.067 0.265 0.080 0.310 0.093 0.354 0.106 0.398 0.119	4.0 2.4 4.6 2.7 5.2 3.1 5.5 3.4 6.1 3.7 6.4 4.0 7.0 4.3	4.9 3.1 5.5 3.4 6.4 4.0 6.7 4.3 7.3 4.6 7.6 4.9 8.2 5.2	7.0 4.0 7.9 4.6 9.2 5.2 10.4 6.1 11.3 6.4 11.9 7.0 12.8 7.0		
													m ³ /s side throw m	0.073 0.069 0.097 0.093 0.122 0.116 0.146 0.139 0.170 0.162 0.195 0.186 0.220 0.209	3.1 3.1 3.7 3.7 4.3 4.3 4.6 4.6 4.9 4.9 5.2 5.2 5.5 5.5	3.7 3.7 4.3 4.3 4.9 4.9 5.2 5.2 5.5 5.5 6.1 6.1 6.4 6.4	5.2 5.2 6.1 6.1 7.0 7.0 7.6 7.6 7.9 7.9 8.5 8.5 9.2 9.2		
													m ³ /s side throw m	0.106 0.142 0.177 0.212 0.248 0.283 0.319	3.7 4.3 4.9 5.2 5.5 6.1 6.4	4.6 5.2 5.8 6.4 6.7 7.3 7.9	6.4 7.3 8.2 9.2 9.8 10.4 11.0		
													m ³ /s side throw m	0.172 0.040 0.230 0.053 0.288 0.067 0.345 0.080 0.403 0.093 0.460 0.106 0.518 0.119	4.3 2.4 4.9 2.7 5.5 3.1 6.1 3.4 6.4 3.7 7.0 4.0 7.3 4.3	5.2 3.1 6.1 3.4 7.0 4.0 7.6 4.3 7.9 4.6 8.5 4.9 9.2 5.2	7.3 4.0 8.5 4.6 10.4 5.5 11.3 6.1 12.2 6.4 12.8 7.0 13.7 7.0		
m ³ /s side throw m	0.212 0.283 0.354 0.425 0.496 0.566 0.637	4.3 4.9 5.5 6.1 6.4 6.7 7.3	5.2 6.1 7.0 7.6 8.2 8.8 9.5										7.3 8.5 9.8 10.4 11.3 12.2 12.8						
300 x 375	Return Factors	NC+3 -SP=1.7 TP	NC										0.177	0.236	0.295	0.354	0.413	0.472	0.531
						16	23	29	33	37	41								
						A	B	A	B	A	B	A	B						
				AD 0.112 m ²	 42  43	 31	 33	 37	 22, 23	 52  54 53	 12, 13	m ³ /s side throw m	0.053 0.035 0.071 0.047 0.088 0.059 0.106 0.071 0.124 0.083 0.142 0.094 0.159 0.106	2.4 1.8 2.7 2.1 3.1 2.4 3.4 2.7 3.7 2.7 4.0 3.1 4.3 3.4	3.4 2.4 3.4 2.7 4.0 3.1 4.3 3.4 4.6 3.7 4.9 4.0 5.2 4.3	4.3 3.1 4.9 3.7 5.5 4.3 6.1 4.6 6.4 4.9 7.0 5.2 7.3 5.5			
												m ³ /s side throw m	0.071 0.035 0.094 0.047 0.118 0.059 0.142 0.071 0.165 0.083 0.189 0.094 0.212 0.106	3.1 1.8 3.7 2.1 4.3 2.4 4.6 2.7 4.9 2.7 5.2 3.1 5.5 3.4	3.7 2.4 4.3 2.7 4.9 3.1 5.2 3.4 5.5 3.7 6.1 4.0 6.4 4.3	5.2 3.1 6.1 3.7 7.0 4.3 7.6 4.6 7.9 4.9 8.5 5.2 9.2 5.5			
												m ³ /s side throw m	0.061 0.055 0.081 0.074 0.102 0.092 0.122 0.111 0.142 0.129 0.162 0.147 0.183 0.166	2.7 2.1 3.1 2.4 3.4 2.7 3.7 3.1 4.0 3.4 4.3 3.4 4.6 3.7	3.1 2.7 3.7 3.1 4.3 3.4 4.6 3.7 4.9 4.0 5.2 4.3 5.5 4.6	4.6 3.7 5.2 4.3 5.8 4.9 6.4 5.2 6.7 5.5 7.3 6.1 7.9 6.4			
												m ³ /s side throw m	0.053 0.062 0.071 0.083 0.088 0.103 0.106 0.124 0.124 0.144 0.142 0.165 0.159 0.186	3.1 3.1 3.7 3.7 4.3 4.3 4.6 4.6 4.9 4.9 5.2 5.2 5.5 5.5	3.7 3.7 4.3 4.3 4.9 4.9 5.2 5.2 5.5 5.5 6.1 6.1 6.4 6.4	5.2 5.2 6.1 6.1 7.0 7.0 7.6 7.6 7.9 7.9 8.5 8.5 9.2 9.2			
												m ³ /s side throw m	0.088 0.118 0.147 0.177 0.207 0.236 0.266	3.4 4.0 4.6 4.9 5.2 5.5 6.1	4.3 4.9 5.5 6.1 6.4 6.7 7.3	5.8 6.7 7.6 8.2 8.8 9.5 10.1			
												m ³ /s side throw m	0.106 0.071 0.142 0.094 0.177 0.118 0.212 0.142 0.248 0.165 0.283 0.189 0.319 0.212	3.7 2.7 4.3 3.1 4.9 3.4 5.2 3.7 5.5 4.0 6.1 4.3 6.4 4.6	4.6 3.4 5.2 4.0 5.8 4.6 6.4 4.9 7.3 5.2 8.2 6.1 9.2 6.1	6.4 4.9 7.3 5.5 8.2 6.4 9.2 7.3 10.4 7.6 11.0 8.2 12.8 8.2			
												m ³ /s side throw m	0.177 0.236 0.295 0.354 0.413 0.472 0.531	4.3 4.9 5.5 6.1 6.4 6.7 7.3	5.2 6.1 7.0 7.6 8.2 8.8 9.5	7.3 8.5 9.8 10.4 11.3 12.2 12.8			

* These cores are constructed to give as near as possible equal air flow in A & B directions.

Diffusers - Ceiling Multi Pattern

Size in mm	Patterns		Neck Vel m/s	1.57	2.10	2.62	3.15	3.67	4.19	4.72								
	Return Factors	NC+4 -SP=2.0 TP	TP Pa	6	11	18	25	35	45	57								
300 x 450	 42	 43	Total m ³ /s NC	0.212	0.283	0.354	0.425	0.496	0.566	0.637								
			m ³ /s side throw m	A	B	A	B	A	B	A	B							
AD 0.135 m ²	 45 *	 31	m ³ /s side throw m	0.071	0.035	0.094	0.047	0.118	0.059	0.142	0.071	0.165	0.083	0.189	0.094	0.212	0.106	
			m ³ /s side throw m	3.1	1.8	3.7	2.1	4.3	2.4	4.6	2.7	4.9	2.7	5.2	3.1	5.5	3.4	5.5
			m ³ /s side throw m	3.7	2.4	4.3	2.7	4.9	3.1	5.2	3.4	5.5	3.7	6.1	4	6.4	4.3	6.4
			m ³ /s side throw m	5.2	3.1	6.1	3.7	7	4.3	7.6	4.6	7.9	4.9	8.5	5.2	9.2	5.5	9.2
			m ³ /s side throw m	0.053	0.053	0.071	0.071	0.088	0.088	0.106	0.106	0.124	0.124	0.142	0.142	0.159	0.159	0.159
			m ³ /s side throw m	3.1	3.1	3.7	3.7	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.5	5.5	5.5
			m ³ /s side throw m	3.7	3.7	4.3	4.3	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	6.4
			m ³ /s side throw m	5.2	5.2	6.1	6.1	7.2	7.2	7.6	7.6	7.9	7.9	8.5	8.5	9.2	9.2	9.2
			m ³ /s side throw m	0.088	0.035	0.118	0.047	0.147	0.059	0.177	0.071	0.206	0.083	0.236	0.094	0.265	0.106	0.265
			m ³ /s side throw m	3.4	1.8	4.0	2.1	4.6	2.4	4.9	2.7	5.2	2.7	5.5	3.1	6.1	3.4	6.1
			m ³ /s side throw m	4.3	2.4	4.9	2.7	5.5	3.1	6.1	3.4	6.4	3.7	7.0	4.0	7.3	4.3	7.3
			m ³ /s side throw m	5.8	3.1	6.7	3.7	7.6	4.3	8.2	4.6	8.8	4.9	9.5	5.2	10.1	5.5	10.1
AD 0.157 m ²	 45 *	 31	m ³ /s side throw m	0.067	0.079	0.088	0.106	0.111	0.133	0.133	0.159	0.155	0.186	0.177	0.212	0.199	0.239	
			m ³ /s side throw m	2.7	2.4	3.1	2.7	3.4	3.1	3.7	3.4	4.0	3.7	4.3	4.4	4.6	4.3	4.6
			m ³ /s side throw m	3.4	3.1	4.0	3.4	4.6	4.0	4.9	4.3	5.2	4.6	5.5	4.9	6.1	5.2	5.2
			m ³ /s side throw m	4.9	4.3	5.5	4.9	6.4	5.5	6.7	6.1	7.3	6.4	7.6	7.0	8.2	7.3	7.3
			m ³ /s side throw m	0.071	0.071	0.094	0.094	0.118	0.118	0.142	0.142	0.165	0.165	0.189	0.189	0.212	0.212	0.212
			m ³ /s side throw m	3.1	3.1	3.7	3.7	4.3	4.3	4.6	4.6	4.9	4.9	5.2	5.2	5.5	5.5	5.5
			m ³ /s side throw m	3.7	3.7	4.3	4.3	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	6.4
			m ³ /s side throw m	5.2	5.2	6.1	6.1	7.0	7.0	7.6	7.6	7.9	7.9	8.5	8.5	9.2	9.2	9.2
			m ³ /s side throw m	0.106		0.142		0.177		0.212		0.248		0.283		0.319		0.319
			m ³ /s side throw m	3.7		4.3		4.9		5.2		5.5		6.1		6.4		6.4
			m ³ /s side throw m	4.6		5.2		5.8		6.4		6.7		7.3		7.9		7.9
			m ³ /s side throw m	6.4		7.3		8.2		9.2		9.8		10.4		11.0		11.0
AD 0.180 m ²	 45 *	 31	m ³ /s side throw m	0.142	0.071	0.189	0.094	0.236	0.118	0.283	0.142	0.330	0.165	0.378	0.189	0.425	0.212	
			m ³ /s side throw m	4.3	2.7	4.6	3.1	5.2	3.4	6.1	3.7	6.4	4.0	7.0	4.3	7.3	4.6	
			m ³ /s side throw m	5.2	3.4	6.1	4.0	7.0	4.6	7.6	4.9	8.5	5.5	9.2	6.1	9.2	6.1	
			m ³ /s side throw m	7.0	4.9	7.9	5.5	9.2	6.4	10.4	6.7	11.3	7.3	12.2	7.6	12.8	8.2	
			m ³ /s side throw m	0.212		0.283		0.354		0.425		0.496		0.566		0.637		0.637
			m ³ /s side throw m	4.3		4.9		5.5		6.1		6.7		7.3		7.9		7.9
			m ³ /s side throw m	5.2		6.1		7.0		7.6		8.2		8.8		9.2		9.2
			m ³ /s side throw m	7.3		8.5		9.8		10.4		11.3		12.2		12.8		12.8
			m ³ /s side throw m	0.212		0.283		0.354		0.425		0.496		0.566		0.637		0.637
			m ³ /s side throw m	4.3		4.9		5.5		6.1		6.7		7.3		7.9		7.9
			m ³ /s side throw m	5.2		6.1		7.0		7.6		8.2		8.8		9.2		9.2
			m ³ /s side throw m	7.3		8.5		9.8		10.4		11.3		12.2		12.8		12.8

* These cores are constructed to give as near as possible equal air flow in A & B directions.

CMP – Performance Data

Size in mm	Patterns	Neck Vel m/s TP Pa	1.57 6	2.10 11	2.62 17	3.15 24	3.67 33	4.19 43	4.72 54								
375 x 450	Return NC+5	Total m³/s	0.265	0.354	0.442	0.531	0.619	0.708	0.796								
	Factors -SP=2.1 TP	NC	9	18	25	31	35	39	43								
			A B	A B	A B	A B	A B	A B	A B								
	42	43	m³/s side throw m	0.077 0.055 2.7 2.1 3.4 2.7 4.9 3.7	0.103 0.074 3.1 2.4 4 3.1 5.5 4.3	0.129 0.092 3.4 2.7 4.6 3.4 6.4 4.9	0.155 0.111 3.7 3.1 4.9 3.7 6.7 5.2	0.181 0.129 4 3.4 5.2 4 7.3 5.5	0.207 0.147 4.3 3.4 5.5 4.3 7.6 6.1	0.232 0.166 4.6 3.7 6.1 4.6 8.2 6.4							
	31		m³/s side throw m	0.105 0.055 3.7 2.1 4.6 2.7 6.4 3.7	0.140 0.074 4.3 2.4 5.2 3.1 7.3 4.3	0.175 0.092 4.9 2.7 5.8 3.4 8.2 4.9	0.210 0.111 5.2 3.1 6.4 3.7 9.2 5.2	0.245 0.129 5.5 3.4 6.7 4.0 9.8 5.5	0.280 0.147 6.1 3.4 7.3 4.3 10.4 6.1	0.315 0.166 6.4 3.7 7.9 4.6 11.0 6.4							
	33		m³/s side throw m	0.093 0.080 3.4 2.4 4.3 3.1 5.8 4.3	0.124 0.106 4.0 2.7 4.9 3.4 6.7 4.9	0.155 0.133 4.6 3.1 5.5 4.0 7.6 5.5	0.186 0.159 4.9 3.4 6.1 4.3 8.2 6.1	0.217 0.186 5.2 3.7 6.4 4.6 8.8 6.4	0.248 0.212 5.5 4.0 7.0 4.9 9.5 7.0	0.279 0.239 6.1 4.3 7.3 5.2 10.1 7.3							
	37		m³/s side throw m	0.077 0.094 3.4 3.4 4.3 4.3 5.8 5.8	0.103 0.126 4.0 4.0 4.9 4.9 6.7 6.7	0.129 0.157 4.6 4.6 5.5 5.5 7.6 7.6	0.154 0.188 4.9 4.9 6.1 6.1 8.2 8.2	0.180 0.220 5.2 5.2 6.4 6.4 8.8 8.8	0.206 0.251 5.5 5.5 7.0 7.0 9.5 9.5	0.232 0.282 6.1 6.1 7.3 7.3 10.1 10.1							
	22, 23		m³/s side throw m	0.133 4.0 4.9 7.0	0.177 4.6 5.5 7.9	0.221 5.2 6.4 9.2	0.265 5.5 6.7 9.8	0.310 6.1 7.3 10.4	0.354 6.4 7.6 11.3	0.398 7.0 8.2 11.9							
	52	54	m³/s side throw m	0.155 4.9 6.1 4.3 8.5 7.9	0.111 3.4 5.8 4.0 9.8 7.0	0.207 5.0 6.7 4.9 11.3 10.4	0.147 4.0 6.7 5.5 10.4 11.3	0.258 7.0 8.5 8.2 11.9 12.2	0.184 4.9 6.1 6.4 8.8 12.2	0.310 7.6 8.5 10.1 12.8 12.8	0.221 4.9 5.2 6.4 8.8 12.8	0.362 7.6 8.2 10.1 12.8 12.8	0.258 5.2 6.4 7.3 9.5 12.8	0.414 8.2 10.1 10.7 14.6 13.7	0.295 5.5 7.0 7.3 9.5 10.1	0.465 8.8 10.7 10.7 14.6 13.7	0.331 6.1 7.3 7.3 10.1 13.7
	55	53	m³/s side throw m	0.265 4.6 5.5 7.9	0.354 5.2 6.4 9.2	0.442 5.8 7.3 10.4	0.531 6.4 7.9 11.3	0.619 6.7 8.5 12.2	0.708 7.3 9.2 12.8	0.796 7.9 9.8 13.7							
12, 13		m³/s side throw m	0.265 4.6 5.5 7.9	0.354 5.2 6.4 9.2	0.442 5.8 7.3 10.4	0.531 6.4 7.9 11.3	0.619 6.7 8.5 12.2	0.708 7.3 9.2 12.8	0.796 7.9 9.8 13.7								
375 x 525	Return NC+6	Total m³/s	0.309	0.413	0.515	0.619	0.723	0.826	0.930								
	Factors -SP=2.2 TP	NC	9	18	25	31	35	39	43								
			A B	A B	A B	A B	A B	A B	A B								
	42	43	m³/s side throw m	0.099 3.7 4.6 6.4	0.055 2.1 2.7 3.7	0.133 4.3 5.2 8.2	0.074 2.4 3.1 4.9	0.166 5.8 6.4 9.2	0.092 2.7 3.4 5.2	0.199 6.4 7.3 9.8	0.111 3.1 4.0 5.5	0.233 6.7 7.3 10.4	0.129 4.0 4.3 6.1	0.266 7.0 7.3 10.1	0.147 3.4 4.3 6.1	0.299 6.4 7.3 10.1	0.166 3.7 4.6 6.4
	45*		m³/s side throw m	0.077 3.4 4.3 5.8	0.077 3.4 4.3 5.8	0.103 4.0 4.9 6.7	0.103 4.0 4.9 6.7	0.129 4.6 5.5 7.6	0.129 4.6 5.5 7.6	0.154 4.9 6.1 8.2	0.154 4.9 6.1 8.2	0.180 5.2 6.4 8.8	0.180 5.2 6.4 8.8	0.206 5.5 7.0 9.5	0.206 5.5 7.0 9.5	0.232 6.1 7.3 10.1	0.232 6.1 7.3 10.1
	31		m³/s side throw m	0.127 3.7 4.6 6.4	0.055 2.1 2.7 3.7	0.170 4.3 5.2 8.2	0.074 2.4 3.1 4.9	0.212 5.8 6.4 9.2	0.092 2.7 3.4 5.2	0.254 6.4 7.3 9.8	0.111 3.1 4.0 5.5	0.297 6.7 7.3 10.4	0.129 4.0 4.3 6.1	0.339 7.3 7.3 10.4	0.147 3.4 4.3 6.1	0.382 6.4 7.9 11.0	0.166 3.7 4.6 6.4
	33		m³/s side throw m	0.101 3.1 3.7 5.2	0.109 2.7 3.4 4.9	0.134 3.7 4.3 6.1	0.144 3.1 4.0 5.5	0.168 4.3 4.9 7.0	0.180 3.4 4.6 6.4	0.201 4.6 5.2 7.6	0.217 3.7 4.9 6.7	0.235 4.9 5.5 7.9	0.253 4.0 5.2 7.3	0.269 5.2 6.1 8.5	0.289 4.3 5.5 7.6	0.303 5.4 6.4 9.2	0.325 4.6 6.1 9.2
	37		m³/s side throw m	0.100 3.7 4.6 6.4	0.105 3.7 4.6 6.4	0.133 4.3 5.2 8.2	0.140 4.3 5.2 8.2	0.166 4.9 5.8 8.2	0.175 4.9 5.8 8.2	0.199 5.2 6.4 9.2	0.210 5.2 6.4 9.2	0.232 5.5 6.7 9.8	0.245 5.5 6.7 9.8	0.266 6.1 7.3 10.4	0.280 6.1 7.3 10.4	0.299 6.4 7.9 11.0	0.315 6.4 7.9 11.0
	22, 23		m³/s side throw m	0.154 4.0 4.9 7.0	0.206 4.6 5.5 7.9	0.258 5.2 6.4 9.2	0.310 5.5 6.7 9.8	0.362 6.1 7.3 10.4	0.413 6.4 7.6 11.3	0.465 7.0 8.2 11.9	0.519 7.6 8.8 12.8	0.573 8.2 9.2 13.7	0.627 8.8 9.8 14.6	0.681 9.5 10.4 15.5	0.735 10.1 11.0 16.4	0.789 10.7 11.6 17.3	0.843 11.3 12.2 18.2
	52	54	m³/s side throw m	0.199 4.3 5.2 7.3	0.111 3.4 4.3 5.8	0.266 4.9 6.1 8.5	0.147 4.0 4.9 6.7	0.331 7.0 8.8 11.3	0.184 4.6 5.5 7.6	0.398 6.1 7.6 10.4	0.221 4.9 6.1 8.2	0.465 6.4 7.9 11.3	0.258 5.2 6.4 8.8	0.532 7.0 8.5 12.2	0.295 5.5 7.0 9.5	0.599 7.3 9.2 12.8	0.331 6.1 7.3 10.1
55	53	m³/s side throw m	0.309 4.9 6.1 8.5	0.413 5.8 7.0 9.8	0.515 6.7 7.9 11.3	0.619 7.0 8.5 11.9	0.723 7.6 9.2 12.8	0.826 8.2 10.1 13.7	0.930 8.8 10.7 14.6								
12, 13		m³/s side throw m	0.309 4.9 6.1 8.5	0.413 5.8 7.0 9.8	0.515 6.7 7.9 11.3	0.619 7.0 8.5 11.9	0.723 7.6 9.2 12.8	0.826 8.2 10.1 13.7	0.930 8.8 10.7 14.6								
375 x 600	Return NC+7	Total m³/s	0.354	0.472	0.590	0.708	0.826	0.944	1.060								
	Factors -SP=2.7 TP	NC	10	19	26	32	36	40	44								
			A B	A B	A B	A B	A B	A B	A B								
	42	43	m³/s side throw m	0.122 3.7 4.6 6.4	0.055 2.1 2.7 3.7	0.162 4.3 5.2 8.2	0.074 2.4 3.1 4.9	0.203 5.8 6.4 9.2	0.092 2.7 3.4 5.2	0.244 6.4 7.3 9.8	0.111 3.1 4.0 5.5	0.284 6.9 7.3 10.4	0.129 4.0 4.3 6.1	0.325 7.0 7.3 10.1	0.147 3.4 4.3 6.1	0.365 6.4 7.9 11.0	0.166 3.7 4.6 6.4
	45*		m³/s side throw m	0.077 3.4 4.3 5.8	0.100 3.4 4.6 6.4	0.103 4.0 4.9 6.7	0.133 4.0 4.9 6.7	0.129 4.6 5.5 7.6	0.166 4.9 6.1 8.2	0.154 4.9 6.1 8.2	0.199 5.2 6.4 8.8	0.180 5.2 6.4 8.8	0.232 5.5 7.0 9.5	0.206 5.5 7.0 9.5	0.266 6.1 7.3 10.1	0.232 6.1 7.3 10.1	0.299 6.4 7.9 11.0
	31		m³/s side throw m	0.149 4.0 4.9 7.0	0.055 2.1 2.7 3.7	0.199 4.6 5.5 8.2	0.074 2.4 3.1 4.9	0.249 6.4 7.3 9.8	0.092 2.7 3.4 5.2	0.299 7.3 8.2 10.4	0.111 3.1 4.0 5.5	0.348 7.3 8.2 11.3	0.129 4.0 4.3 6.1	0.398 7.6 8.5 11.3	0.147 3.4 4.3 6.1	0.448 8.2 9.2 11.9	0.166 3.7 4.6 6.4
	33		m³/s side throw m	0.100 3.7 4.6 6.4	0.142 3.0 3.7 5.2	0.142 4.3 5.2 8.2	0.189 3.7 4.3 6.1	0.177 4.9 5.8 8.2	0.236 4.3 5.2 8.2	0.212 5.2 6.4 9.2	0.283 4.6 5.5 8.2	0.248 5.5 6.7 9.8	0.330 4.9 5.5 8.5	0.283 6.1 7.3 10.4	0.378 5.2 6.1 8.5	0.319 6.4 7.9 11.0	0.425 5.5 6.4 9.2
	37		m³/s side throw m	0.122 3.7 4.6 6.4	0.116 3.7 4.6 6.4	0.162 4.3 5.2 8.2	0.155 4.3 5.2 8.2	0.203 4.9 5.8 8.2	0.194 4.9 5.8 8.2	0.244 5.2 6.4 9.2	0.232 5.2 6.4 9.2	0.284 5.5 6.7 9.8	0.271 5.5 6.7 9.8	0.325 6.1 7.3 10.4	0.310 6.1 7.3 10.4	0.366 6.4 7.9 11.0	0.348 6.4 7.9 11.0
	22, 23		m³/s side throw m	0.177 4.3 5.2 7.3	0.236 4.9 6.1 8.5	0.295 5.5 7.0 9.8	0.354 6.1 7.6 10.4	0.413 6.4 7.9 11.3	0.472 7.0 8.5 12.2	0.531 7.6 9.2 13.7	0.590 8.2 9.8 14.6	0.648 8.8 10.4 15.5	0.707 9.5 11.0 16.4	0.766 10.1 11.6 17.3	0.825 10.7 12.2 18.2	0.884 11.3 12.8 19.1	0.943 11.9 13.4 20.0
	52	54	m³/s side throw m	0.244 4.6 5.5 7.9	0.111 3.4 4.3 5.8	0.325 4.9 6.4 9.2	0.147 4.0 4.9 6.7	0.406 7.3 8.2 10.4	0.184 4.6 5.5 7.6	0.405 6.1 7.6 11.3	0.221 4.9 6.1 8.2	0.568 6.4 7.9 12.2	0.258 5.2 6.4 8.8	0.650 7.0 8.5 12.8	0.295 5.5 7.0 9.5	0.731 7.3 9.2 13.7	0.331 6.1 7.3 10.1
55	53	m³/s side throw m	0.354 5.2 6.4 9.2	0.472 6.1 7.3 10.4	0.590 7.0 8.2 11.9	0.708 7.6 9.2 12.8	0.826 8.2 9.8 13.7	0.944 8.8 10.4 14.6	1.060 9.5 11.0 15.6								
12, 13		m³/s side throw m	0.354 5.2 6.4 9.2	0.472 6.1 7.3 10.4	0.590 7.0 8.2 11.9	0.708 7.6 9.2 12.8	0.826 8.2 9.8 13.7	0.944 8.8 10.4 14.6	1.060 9.5 11.0 15.6								

* These cores are constructed to give as near as possible equal air flow in A & B directions.

Size in mm	Patterns		Neck Vel m/s TP Pa	1.57		2.10		2.62		3.15		3.67		4.19		4.72							
	Return Factors	NC+6 -SP=2.3 TP		6		11		17		24		33		43		54							
450 x 525	42	43	Total m ³ /s NC	0.372		0.496		0.618		0.743		0.869		0.991		1.110							
				9		19		26		32		36		40		44							
AD 0.236 m ²	A	B	m ³ /s side throw m	0.106	0.080	0.142	0.106	0.177	0.132	0.212	0.159	0.248	0.186	0.283	0.212	0.318	0.239						
				3.1	2.4	3.7	2.7	4.3	3.1	4.6	3.4	4.9	3.7	4.9	3.7	5.2	4	5.5	4.3				
450 x 525	42	43	m ³ /s side throw m	3.7	3.1	4.3	3.4	4.9	4	5.2	4.3	5.5	4.6	6.1	4.9	6.4	5.2	6.4					
				5.2	4.3	6.1	4.9	7	5.5	7.6	6.1	7.9	6.4	8.5	7	9.2	7.3	9.2	7.3				
				0.146	0.080	0.195	0.106	0.243	0.133	0.292	0.159	0.341	0.186	0.389	0.212	0.438	0.239	0.438	0.239				
				4.0	2.4	4.6	2.7	5.2	3.1	5.5	3.4	6.1	3.7	6.4	4.0	7.0	4.9	7.0	4.9				
				4.9	3.1	5.5	3.4	6.4	4.0	6.7	4.3	7.3	4.6	7.6	4.9	8.2	5.2	8.2	5.2				
				7.0	4.3	7.9	4.9	9.2	5.5	9.8	6.1	10.4	6.4	10.4	6.4	11.3	7.0	11.9	7.3				
				0.132	0.109	0.176	0.144	0.219	0.180	0.263	0.217	0.308	0.253	0.351	0.289	0.395	0.325	0.395	0.325				
				4.0	2.7	4.6	3.1	5.2	3.4	5.5	3.7	6.1	4.0	6.4	4.3	7.0	4.6	7.0	4.6				
				4.9	3.4	5.5	4.0	6.4	4.6	6.7	4.9	7.3	5.2	7.6	5.5	8.2	6.1	8.2	6.1				
				7.0	4.9	7.9	5.5	9.2	6.4	9.8	6.7	10.4	7.3	10.4	7.3	11.3	7.6	11.9	8.2				
AD 0.236 m ²	A	B	m ³ /s side throw m	0.133	0.119	0.177	0.159	0.221	0.198	0.266	0.238	0.310	0.278	0.354	0.317	0.399	0.357	0.399	0.357				
				4.0	3.7	4.6	4.3	5.2	4.9	5.5	5.2	6.1	5.5	6.4	6.1	7.0	6.4	7.0	6.4				
				4.9	4.6	5.5	5.2	6.4	5.8	6.7	6.4	7.3	6.7	7.6	7.3	8.2	7.9	8.2	7.9				
				7.0	6.4	7.9	7.3	9.2	8.2	9.8	8.2	10.4	9.2	10.4	9.2	11.3	10.4	11.9	11.0				
				0.186	0.108	0.248	0.108	0.309	0.108	0.372	0.108	0.434	0.108	0.496	0.108	0.557	0.108	0.557	0.108	0.557			
				4.3	4.9	6.1	5.5	7.0	6.4	7.6	7.0	8.2	7.6	8.5	7.9	9.1	8.5	9.1	8.5				
				5.2	6.1	7.3	6.4	8.2	7.3	9.2	8.2	10.4	9.2	11.3	10.4	12.2	11.3	12.2	11.3				
				0.212	0.160	0.283	0.212	0.359	0.264	0.425	0.319	0.496	0.373	0.566	0.425	0.637	0.477	0.637	0.477				
				4.3	3.7	4.9	4.3	5.5	4.9	6.1	5.2	6.4	5.5	7.0	6.1	7.3	6.4	7.3	6.4				
				5.2	4.6	6.1	5.2	7.0	5.8	7.6	6.4	7.9	6.7	8.5	7.3	9.1	7.9	9.1	7.9				
7.3	6.4	8.5	7.3	9.8	8.2	10.4	9.2	11.3	9.8	12.2	10.4	12.8	11.0	12.8	11.0								
450 x 600	42	43	Total m ³ /s NC	0.425		0.566		0.708		0.851		0.991		1.130		1.270							
				11		20		27		33		37		41		45							
				AD 0.27 m ²	A	B	m ³ /s side throw m	0.133	0.080	0.177	0.106	0.221	0.133	0.266	0.159	0.310	0.186	0.354	0.212	0.398	0.239		
								4.0	2.4	4.6	2.7	5.2	3.1	5.5	3.4	6.1	3.7	6.4	4.0	7.0	4.3	7.0	4.3
								4.9	3.1	5.5	3.4	6.4	4.0	6.7	4.3	7.3	4.6	7.6	4.9	8.2	5.2	8.2	5.2
								7.0	4.3	7.9	4.9	9.2	5.5	9.8	6.1	10.4	6.4	11.3	7.0	11.9	7.3	11.9	7.3
								0.106	0.106	0.142	0.142	0.177	0.177	0.212	0.212	0.248	0.248	0.283	0.283	0.319	0.319		
								3.7	3.7	4.3	4.3	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4		
								4.6	4.6	5.2	5.2	5.8	5.8	6.4	6.4	6.7	6.7	7.3	7.3	7.9	7.9		
								6.4	6.4	7.3	7.3	8.2	8.2	9.2	9.2	9.8	9.8	10.4	10.4	11.0	11.0		
0.173	0.080	0.230	0.106					0.288	0.133	0.345	0.159	0.403	0.186	0.460	0.212	0.518	0.239						
4.3	2.4	4.9	2.7					5.5	3.1	6.1	3.4	6.4	3.7	7.0	4.0	7.3	4.3						
5.2	3.1	6.1	3.4	7.0	4.0	7.6	4.3	7.9	5.2	8.5	4.9	9.2	5.2										
7.3	4.3	8.5	4.9	9.8	5.5	10.4	6.1	11.3	6.4	12.2	7.0	12.8	7.3										
AD 0.315 m ²	A	B	m ³ /s side throw m	0.142	0.142	0.189	0.189	0.236	0.236	0.283	0.283	0.330	0.330	0.378	0.378	0.425	0.425						
				4.0	3.1	4.6	3.7	5.2	4.3	5.5	4.6	6.1	4.9	6.4	5.2	7.0	5.5						
				4.9	3.7	5.5	4.3	6.4	4.9	6.7	5.2	7.3	5.5	7.6	6.1	8.2	6.4						
				7.0	5.2	7.9	6.1	9.2	7.0	9.8	7.6	10.4	7.9	11.3	8.5	11.9	9.2						
				0.133	0.146	0.177	0.195	0.221	0.243	0.266	0.292	0.310	0.340	0.354	0.389	0.399	0.438						
				4.0	4.0	4.6	4.6	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4	7.0	7.0						
				4.9	4.9	5.5	5.5	6.4	6.4	6.7	6.7	7.3	7.3	7.6	7.6	8.2	8.2						
				7.0	7.0	7.9	7.9	9.2	9.2	9.8	9.8	10.4	10.4	11.3	11.3	11.9	11.9						
				0.212	0.283	0.354	0.212	0.443	0.265	0.425	0.319	0.496	0.373	0.566	0.425	0.637	0.477						
				4.3	4.9	5.5	4.3	5.8	4.9	6.4	5.2	6.7	5.5	7.3	6.1	7.9	6.4						
5.2	6.1	7.0	5.2	7.3	5.8	7.9	6.4	8.5	6.7	9.2	7.2	9.8	7.9										
7.3	8.5	9.8	7.3	10.4	8.2	11.3	9.2	12.2	9.8	12.8	10.4	13.7	11.1										
525 x 600	42	43	Total m ³ /s NC	0.496		0.661		0.826		0.991		1.156		1.322		1.490							
				12		21		28		34		38		42		46							
				AD 0.315 m ²	A	B	m ³ /s side throw m	0.139	0.109	0.186	0.144	0.233	0.180	0.279	0.217	0.326	0.253	0.372	0.289	0.419	0.325		
								3.4	2.7	4.0	3.1	4.6	3.4	4.9	3.7	5.2	4.0	5.5	4.3	6.1	4.6		
								4.3	3.4	4.9	4.0	5.5	4.6	6.1	4.9	6.4	5.2	7.0	5.5	7.3	6.1		
								5.8	4.9	6.7	5.5	7.6	6.4	8.2	6.7	8.8	7.3	9.5	7.6	10.1	8.2		
								0.194	0.109	0.258	0.144	0.323	0.180	0.387	0.217	0.452	0.253	0.517	0.289	0.581	0.325		
								4.3	2.7	4.9	3.1	5.5	3.4	6.1	3.7	6.4	4.0	7.0	4.3	7.3	4.6		
								5.2	3.4	6.1	4.0	7.0	4.6	7.6	4.9	7.9	5.2	8.5	5.5	9.2	6.1		
								7.3	4.9	8.5	5.5	9.8	6.4	10.4	6.7	11.3	7.3	12.2	7.6	12.8	8.2		
0.177	0.142	0.236	0.189					0.295	0.236	0.354	0.283	0.414	0.331	0.471	0.377	0.532	0.426						
4.3	3.1	4.9	3.7					5.5	4.3	6.1	4.6	6.4	4.9	7.0	5.2	7.3	5.5						
5.2	3.7	6.1	4.3	7.0	4.9	7.6	5.2	7.9	5.5	8.5	6.1	9.2	6.4										
7.3	5.2	8.5	6.1	9.8	7.0	10.4	7.6	11.3	7.9	12.2	8.5	12.8	9.2										
AD 0.315 m ²	A	B	m ³ /s side throw m	0.170	0.163	0.227	0.217	0.283	0.271	0.340	0.326	0.397	0.380	0.453	0.434	0.510	0.486						
				3.7	3.7	4.3	4.3	4.9	4.9	5.2	5.2	5.5	5.5	6.1	6.1	6.4	6.4						
				4.6	4.6	5.2	5.2	5.8	5.8	6.4	6.4	6.7	6.7	7.3	7.3	7.9	7.9						
				6.4	6.4	7.3	7.3	8.2	8.2	9.2	9.2	9.8	9.8	10.4	10.4	11.0	11.0						
				0.248	0.330	0.413	0.248	0.496	0.330	0.578	0.330	0.661	0.330	0.991	0.330	1.322	0.330						
				4.6	5.2	5.8	4.6	6.4	5.8	7.0	5.2	7.9	6.4	8.5	6.7	9.2	7.9						
				5.5	6.4	7.3	5.5	8.2	6.4	9.2	7.3	10.4	8.2	11.3	9.2	12.2	10.1						
				7.9	9.2	10.4	7.9	11.3	9.2	12.2	10.1	13.1	11.0	14.0	12.2	15.0	13.1						
				0.279	0.217	0.372	0.289	0.465	0.361	0.577	0.434	0.652	0.505	0.744	0.578	0.838	0.650						
				4.9	4.0	5.8	4.6	6.7	5.2	7.0	5.5	7.6	6.1	8.2	6.4	8.8	7.0						
6.1	4.9	7.0	5.5	7.9	6.4	8.5	6.7	9.2	7.3	10.1	7.6	10.7	8.2										
8.5	7.0	9.8	7.9	11.3	9.2	11.9	9.8	12.8	10.4	13.7	11.3	14.6	11.9										
525 x 600	42	43	m ³ /s side throw m	0.496	0.661	0.826	0.991	1.156	1.322	1.490	1.656	1.822	1.990	2.156	2.322	2.490	2.656						
				5.8	6.7	7.6	8.2	9.2	10.1	11.0	11.9	12.8	13.7	14.6	15.5	16.4	17.3	18.2					
				10.1	11.6	13.1	14.6	16.1	17.6	19.1	20.6	22.1	23.6	25.1	26.6	28.1	29.6	31.1	32.6				

*These cores are constructed to give as near as possible equal air flow in A & B directions.