

CPS & CPR – Perforated Diffusers

Models: CPS & CPR

The Holyoake Series CPS and CPR perforated supply and return diffusers are designed for heating, cooling and ventilating, ceiling applications.

The Series CPS comprises of a perforated face plate mounted in a removable core frame, which blends suitably into many ceiling types. Concealed, adjustable pattern controllers on the rear, provide efficient airflow distribution and can be easily adjusted, by simply removing the fascia, unlocking and repositioning. Then any desired distribution pattern can be obtained, without any change in airflow, or noise levels. This simplifies ordering procedures and eliminates the need to re-balance the system. Series CPR are identical, without patterns. Minimal ceiling plenum height is required, (dependant on connecting spigot style); which is available with a varied choice of round, or square inlet sizes, see table below.

Construction

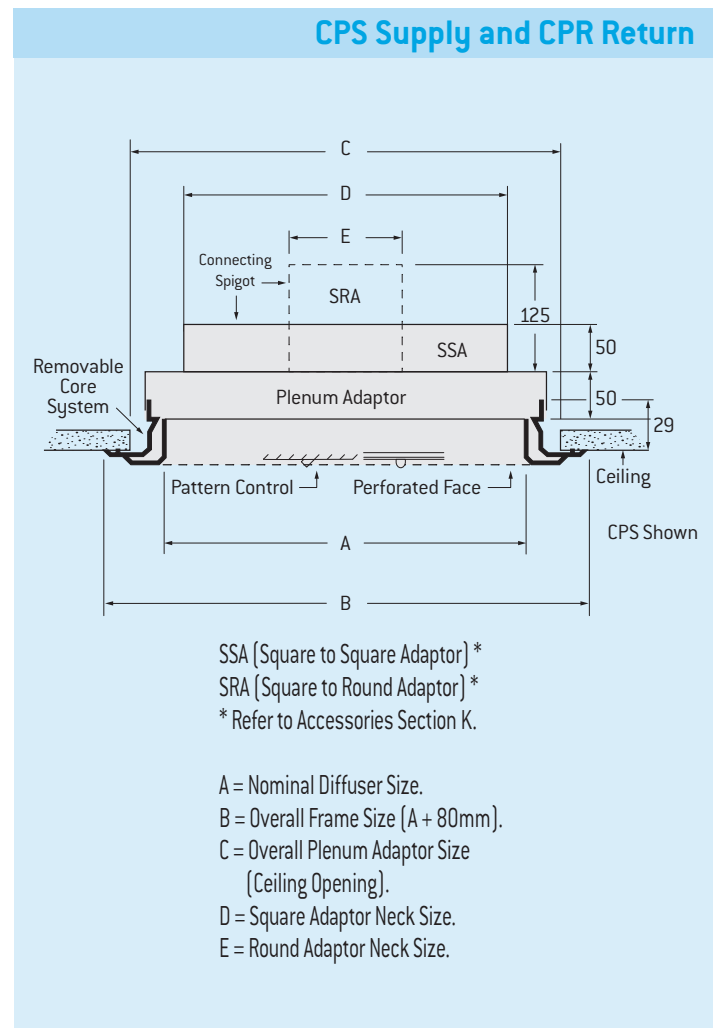
Extruded aluminium frames. Aluminium perforated face and galvanised adaptor pan.

Installation

The CPS plenum adaptor is independently supported, built in to the ceiling and then connected and sealed to the ductwork. The Removable core system allows the preset pattern controllers to be suitably positioned and then the perforated face is simply pushed into the installed frame and clipped into place.

Features

- Aesthetically pleasing design.
- Fully adjustable concealed pattern controllers.
- Infinite range of distribution patterns.
- Compact assembly height and Removable Core frame.
- Plaster ceiling and 'T' Rail installation options.
- Circular, or square inlets in a range of sizes.



A Nominal Diffuser Size		250 x 250	350 x 350	450 x 450	550 x 550	250 x 550	550 x 850	250 x 850	250 x 1150	550 x 1150
C* Overall Plenum Adaptor Size		300 x 300	400 x 400	500 x 500	600 x 600	300 x 600	600 x 900	300 x 900	300 x 1200	600 x 1200
Nominal Neck Size D*	150 x 150	•	•	•	•	•	•	•	•	•
	200 x 200		•	•	•		•		•	•
	250 x 250			•	•		•		•	•
	300 x 300				•		•		•	•
Nominal Neck Diameter E*	150 x 450					•		•	•	
	125 DIA	•	•	•	•	•	•	•	•	•
	150 DIA	•	•	•	•	•	•	•	•	•
	175 DIA	•	•	•	•	•	•	•	•	•
CPS & CPR with Adaptor	200 DIA		•	•	•		•		•	•
	250 DIA		•	•	•		•		•	•
	300 DIA			•	•		•		•	•
	350 DIA			•	•		•		•	•
	400 DIA			•	•		•		•	•

Ceiling Module and Duct Sizes*

• Indicates available combination

Note

1. For other frame styles and module sizes and for the performance of sizes not shown in the capacity tables, contact your local Holyoake branch.
2. Seismic restraints are required, but not supplied.

Options

Heavy gauge galvanised perforated face, available against special order. OBD-2 – Opposed blade damper.

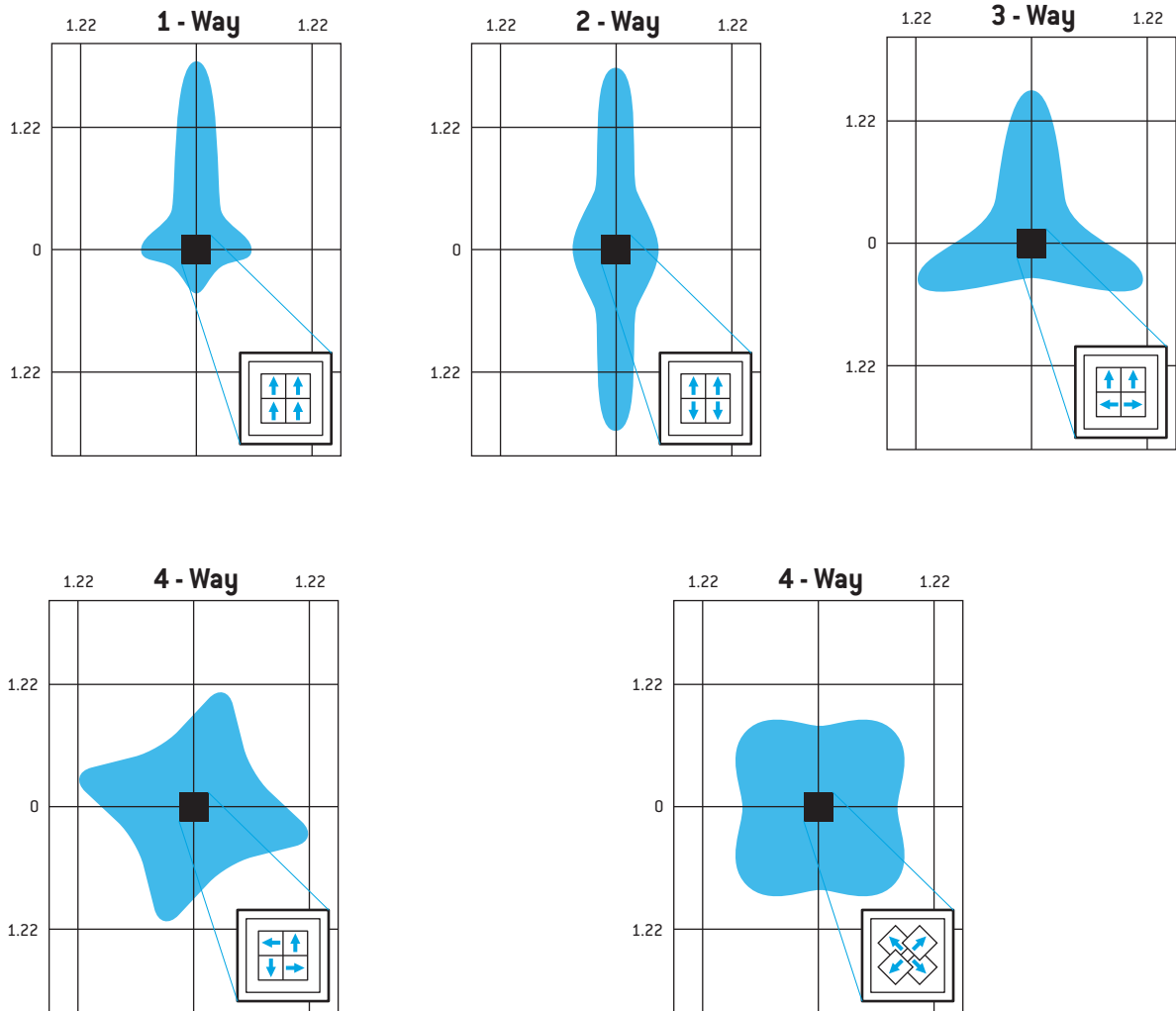
Finish

Standard Finish is Holyoake White, or can be powder coated to specific requirements.

Air Pattern Controller Adjustment Notes

1. Extract the Removeable Core from the CPS diffuser.
2. The pattern controls are mounted on the rear of the Removeable Core and are now visible. Loosen stud tubing and rotate the air pattern controller to the desired flow direction. Tighten the stud tubing on the controller.
3. Replace the Removeable Core assembly.

Versatile Air Distribution for most Applications



Throw values for above pattern will be 0.6 times the values shown in the performance tables.

Performance Notes

1. Refer to Performance Data Tables on the following pages.
2. CPR – Return Data is shown in Dark Blue shaded area at the bottom of each table.
3. Throw values are given for terminal velocities of 0.75 and 0.25 m/s.

CPS & CPR – Performance Data

300 x 300 Module Size

Duct Size	Neck Velocity, m/s Vel. Press., Pa	1.53 2	2.04 3	2.55 4	3.06 6	3.57 8	4.08 10	5.1 16	6.12 23	7.14 31	
125 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	3 0.019 -	5 0.026 -	8 0.033 15	11 0.038 20	15 0.045 24	19 0.052 28	30 0.064 34	43 0.078 39	59 0.090 43	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.6-1.8	0.6-2.1	0.9-2.1	0.9-2.4	1.5-2.7	1.8-3.1	1.8-3.1
		3-WAY	0.3-1.2	0.6-1.8	0.6-2.1	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.1	1.8-3.7	1.8-4.0
		2-WAY	0.3-1.5	0.6-1.8	0.6-2.4	0.9-3.1	1.2-3.1	1.2-3.7	1.8-4.0	2.1-4.3	2.1-4.6
		1-WAY	0.6-1.8	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.4	1.8-4.0	1.8-4.0	2.4-4.3	2.7-4.6
150 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	4 0.028 -	7 0.038 -	10 0.047 17	15 0.057 22	20 0.066 26	25 0.076 30	40 0.092 36	57 0.111 41	77 0.130 45	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.9-2.1	0.9-2.4	0.9-2.4	0.9-2.7	1.5-3.1	1.8-3.1	2.1-3.4
		3-WAY	0.3-1.2	0.6-1.8	0.9-2.4	0.9-2.7	0.9-3.1	1.2-3.1	1.5-3.4	1.8-4.0	2.1-4.3
		2-WAY	0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.2-3.7	1.8-4.3	2.1-4.6	2.4-5.2
		1-WAY	0.6-1.8	0.9-2.7	0.9-3.4	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.2
175 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	6 0.038 -	10 0.050 15	15 0.064 21	21 0.076 26	29 0.090 30	37 0.102 34	58 0.127 40	83 0.151 45	113 0.177 49	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.7	0.9-3.1	1.2-3.1	1.2-3.4	1.8-3.7	2.4-4.0	2.7-4.3
		3-WAY	0.3-1.5	0.6-2.1	0.9-3.1	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.9	2.7-5.2
		2-WAY	0.3-1.8	0.6-2.7	0.9-3.4	1.2-3.7	1.5-4.3	1.5-4.6	2.1-5.2	2.7-5.5	3.1-6.1
		1-WAY	0.6-2.4	0.9-3.4	1.2-3.7	1.5-3.4	1.8-4.3	2.4-4.6	2.7-5.2	3.4-5.5	3.7-6.1
150 x 150	Tot. Press., Pa Flow Rate, m ³ /s NC	5 0.035 -	8 0.047 13	13 0.059 19	19 0.071 24	25 0.083 28	33 0.094 32	50 0.118 38	73 0.142 43	99 0.165 47	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.4	0.9-2.7	1.2-2.7	1.2-3.1	1.8-3.7	2.1-3.7	2.4-4.0
		3-WAY	0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.5-3.7	1.8-4.3	2.1-4.6	2.4-2.9
		2-WAY	0.3-1.8	0.6-2.4	0.9-3.1	1.2-3.7	1.5-4.0	1.5-4.3	2.1-5.2	2.4-5.2	2.7-5.8
		1-WAY	0.6-2.1	0.9-3.1	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.3	2.7-5.2	3.1-5.2	3.4-5.8
* 250 x 250	Neg Stat. Press., Pa Flow Rate, m ³ /s NC	8 0.099 -	13 0.132 17	19 0.163 24	28 0.198 30	39 0.229 35	50 0.262 39	78 0.328 46	113 0.392 53	154 0.458 58	

* performance data for CPR.

300 x 600 Module Size

Duct Size	Neck Velocity, m/s Vel. Press., Pa	1.53 2	2.04 3	2.55 4	3.06 6	3.57 8	4.08 10	5.1 16	6.12 23	7.14 31	
125 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	3 0.019 -	5 0.226 -	7 0.033 14	10 0.038 19	14 0.045 23	18 0.052 27	27 0.064 33	39 0.078 38	54 0.090 42	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.6-1.8	0.6-2.1	0.9-2.1	0.9-2.4	1.5-2.7	1.8-3.1	1.8-3.1
		3-WAY	0.3-1.2	0.6-1.8	0.6-2.1	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.1	1.8-3.7	1.8-4.0
		2-WAY	0.3-1.5	0.6-1.8	0.6-2.4	0.9-3.1	1.2-3.1	1.2-3.7	1.8-4.0	2.1-4.3	2.1-4.6
		1-WAY	0.6-1.8	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.4	1.8-4.0	1.8-4.0	2.4-4.3	2.7-4.6
150 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	4 0.028 -	6 0.038 -	9 0.047 17	12 0.057 22	17 0.066 26	21 0.076 30	33 0.092 36	48 0.111 41	65 0.130 45	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.9-2.1	0.9-2.4	0.9-2.4	0.9-2.7	1.5-3.1	1.8-3.1	2.1-3.4
		3-WAY	0.3-1.2	0.6-1.8	0.9-2.4	0.9-2.7	0.9-3.1	1.2-3.1	1.5-3.4	1.8-4.0	2.1-4.3
		2-WAY	0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.2-3.7	1.8-4.3	2.1-4.6	2.4-5.2
		1-WAY	0.6-1.8	0.9-2.7	0.9-3.4	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.2
175 mm RD	Tot. Press., Pa Flow Rate, m ³ /s NC	4 0.038 -	7 0.050 14	10 0.064 20	15 0.076 25	19 0.090 29	25 0.102 33	39 0.127 39	56 0.151 44	76 0.177 48	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.7	0.9-3.1	1.2-3.1	1.2-3.4	1.8-3.7	2.4-4.0	2.7-4.3
		3-WAY	0.3-1.5	0.6-2.1	0.9-3.1	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.9	2.7-5.2
		2-WAY	0.3-1.8	0.6-2.7	0.9-3.4	1.2-3.7	1.5-4.3	1.5-4.6	2.1-5.2	2.7-5.5	3.1-6.1
		1-WAY	0.6-2.4	0.9-3.4	1.2-3.7	1.5-3.4	1.8-4.3	2.4-4.6	2.7-5.2	3.4-5.5	3.7-6.1
150 x 150	Tot. Press., Pa Flow Rate, m ³ /s NC	5 0.035 -	8 0.047 13	12 0.059 19	18 0.071 24	24 0.083 28	31 0.094 32	48 0.118 38	69 0.142 43	94 0.165 47	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.4	0.9-2.7	1.2-2.7	1.2-3.1	1.8-3.4	2.1-3.7	2.4-4.0
		3-WAY	0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.4-4.9
		2-WAY	0.3-1.8	0.6-2.4	0.9-3.1	1.2-3.7	1.5-4.0	1.5-4.3	2.1-4.9	2.4-5.2	2.7-5.8
		1-WAY	0.6-2.1	0.9-3.1	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.3	2.4-4.9	3.1-5.2	3.4-5.8
150 x 450	Tot. Press., Pa Flow Rate, m ³ /s NC	11 0.106 17	17 0.142 25	28 0.177 31	40 0.212 36	53 0.248 40	69 0.282 44	108 0.354 50	153 0.425 55	210 0.496 59	
	Throw, m	4-WAY	1.5-4.6	1.8-5.2	2.4-5.8	3.1-6.4	3.4-6.7	4.0-7.3	4.9-8.2	5.2-9.2	5.8-9.8
		3-WAY	1.5-4.6	2.1-5.2	2.4-5.8	3.1-6.4	3.7-6.7	4.0-7.3	4.9-8.2	5.2-9.2	5.8-9.8
		2-WAY	1.5-4.6	2.1-5.2	2.7-5.8	3.4-6.4	4.0-6.7	4.3-7.3	4.9-8.2	5.2-9.2	5.8-9.8
		1-WAY	2.4-6.4	3.1-7.3	4.0-8.2	4.6-9.2	5.5-9.8	6.1-10.4	6.7-11.9	7.3-12.8	8.2-14.0
* 250 x 500	Neg Stat. Press., Pa Flow Rate, m ³ /s NC	8 0.217 -	13 0.288 19	19 0.363 25	28 0.434 31	39 0.510 36	50 0.578 41	78 0.722 48	113 0.864 55	154 1.010 60	

* performance data for CPR.

400 x 400 Module Size

Duct Size	Neck Velocity, m/s Vel. Press., Pa	1.53 2	2.04 3	2.55 4	3.06 6	3.57 8	4.08 10	5.1 16	6.12 23	7.14 31	
125 mm RD	Tot. Press., Pa	3	5	7	10	14	18	28	40	54	
	Flow Rate, m ³ /s	0.019	0.026	0.033	0.038	0.045	0.052	0.064	0.078	0.090	
	NC	-	-	14	19	23	27	33	38	42	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.6-1.8	0.6-2.1	0.9-2.1	0.9-2.4	1.5-2.7	1.8-3.1	1.8-3.1
		3-WAY	0.3-1.2	0.6-1.8	0.6-2.1	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.1	1.8-3.7	1.8-4.0
2-WAY		0.3-1.5	0.6-1.8	0.6-2.4	0.9-3.1	1.2-3.1	1.2-3.7	1.8-4.0	2.1-4.3	2.1-4.6	
1-WAY		0.6-1.8	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.4	1.8-4.0	1.8-4.0	2.4-4.3	2.7-4.6	
150 mm RD	Tot. Press., Pa	4	6	9	12	17	21	33	48	65	
	Flow Rate, m ³ /s	0.028	0.038	0.047	0.057	0.066	0.076	0.094	0.110	0.130	
	NC	-	-	17	22	26	30	36	41	45	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.9-2.1	0.9-2.4	0.9-2.4	0.9-2.7	1.5-3.1	1.8-3.1	2.1-3.4
		3-WAY	0.3-1.2	0.6-1.8	0.9-2.4	0.9-2.7	0.9-3.1	1.2-3.1	1.5-3.4	1.8-4.0	2.1-4.3
2-WAY		0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.2-3.7	1.8-4.3	2.1-4.6	2.4-5.2	
1-WAY		0.6-1.8	0.9-2.7	0.9-3.4	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.2	
175 mm RD or 150 x 150	Tot. Press., Pa	4	7	10	15	19	25	39	56	76	
	Flow Rate, m ³ /s	0.038	0.050	0.064	0.076	0.090	0.102	0.127	0.151	0.177	
	NC	-	14	20	25	29	33	39	44	48	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.7	0.9-3.1	1.2-3.1	1.2-3.4	1.8-3.7	2.4-4.0	2.7-4.3
		3-WAY	0.3-1.5	0.6-2.1	0.9-3.1	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.9	2.7-5.2
2-WAY		0.3-1.8	0.6-2.7	0.9-3.4	1.2-3.1	1.5-4.3	1.5-4.6	2.1-5.2	2.7-5.5	3.1-6.1	
1-WAY		0.6-2.4	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.4-4.6	2.7-5.2	3.4-5.5	3.7-6.1	
200 mm RD	Tot. Press., Pa	5	7	12	17	22	29	45	64	88	
	Flow Rate, m ³ /s	0.050	0.066	0.083	0.099	0.116	0.132	0.165	0.198	0.231	
	NC	-	16	22	27	31	35	41	46	50	
	Throw, m	4-WAY	0.3-1.8	0.6-2.4	1.2-3.1	1.2-3.4	1.2-3.7	1.5-3.7	1.8-4.0	2.4-4.3	2.7-4.9
		3-WAY	0.3-1.8	0.6-2.4	1.2-3.4	1.2-4.0	1.5-4.0	1.5-4.3	2.1-4.9	2.7-5.5	3.1-5.8
2-WAY		0.3-2.1	0.6-3.1	1.2-3.7	1.2-4.3	1.5-4.6	1.8-5.2	2.4-5.8	3.1-6.4	3.7-6.7	
1-WAY		0.9-2.7	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.6	2.4-5.2	3.1-5.8	4.0-6.4	4.0-6.7	
250 mm RD	Tot. Press., Pa	6	10	16	23	30	39	61	87	119	
	Flow Rate, m ³ /s	0.078	0.104	0.127	0.153	0.179	0.205	0.257	0.309	0.359	
	NC	11	19	25	30	34	38	44	49	53	
	Throw, m	4-WAY	0.3-2.4	0.6-3.1	1.2-3.7	1.2-4.0	1.8-4.3	2.1-4.3	2.4-5.2	3.1-5.5	3.4-6.1
		3-WAY	0.3-2.4	0.6-3.1	1.2-4.0	1.8-4.6	2.1-5.2	2.1-5.5	2.7-6.1	3.4-6.7	3.7-7.0
2-WAY		0.3-2.7	0.6-3.7	1.2-4.3	1.8-5.5	2.1-5.8	2.4-6.4	3.1-7.0	3.7-7.6	4.3-8.5	
1-WAY		0.3-3.4	1.2-4.3	2.1-5.2	2.4-5.5	2.7-5.8	3.1-6.4	3.7-7.0	4.6-7.6	4.6-8.5	
200 x 200	Tot. Press., Pa	5	9	14	20	27	34	54	76	104	
	Flow Rate, m ³ /s	0.064	0.085	0.104	0.125	0.146	0.168	0.210	0.253	0.295	
	NC	9	17	23	28	32	36	42	47	51	
	Throw, m	4-WAY	0.3-2.1	0.6-2.7	1.2-3.4	1.2-3.7	1.5-4.0	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.5
		3-WAY	0.3-2.1	0.6-2.7	1.2-3.7	1.5-4.3	1.8-4.6	1.8-4.9	2.4-5.5	3.1-6.1	3.4-6.4
2-WAY		0.3-2.4	0.6-3.4	1.2-4.0	1.5-4.9	1.8-5.2	2.1-5.8	2.7-6.4	3.4-7.0	4.0-7.6	
1-WAY		0.9-3.1	1.2-4.0	1.8-4.6	2.1-4.9	2.4-5.2	2.7-5.8	3.4-6.4	4.3-7.0	4.3-7.6	
* 350 x 350	Neg Stat. Press., Pa	8	13	19	28	39	50	78	113	154	
	Flow Rate, m ³ /s	0.194	0.257	0.321	0.385	0.449	0.515	0.642	0.770	0.897	
	NC	-	18	25	31	36	40	47	54	59	

* performance data for CPR.

Guide Product Weights		
Approximate Weight in Kg.		
Size	CPR	CPS
300 x 300	1.35	1.75
600 x 600	1.98	2.38

CPS & CPR – Performance Data

500 x 500 Module Size

Duct Size	Neck Velocity, m/s Vel. Press., Pa	1.53 2	2.04 3	2.55 4	3.06 6	3.57 8	4.08 10	5.1 16	6.12 23	7.14 31	
125 mm RD	Tot. Press., Pa	3	5	7	10	14	18	28	40	54	
	Flow Rate, m ³ /s	0.019	0.026	0.033	0.038	0.045	0.052	0.064	0.078	0.090	
	NC	-	-	14	19	23	27	33	38	42	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.6-1.8	0.6-2.1	0.9-2.1	0.9-2.4	1.5-2.7	1.8-3.1	1.8-3.1
		3-WAY	0.3-1.2	0.6-1.8	0.6-2.1	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.1	1.8-3.7	1.8-4.0
2-WAY		0.3-1.5	0.6-1.8	0.6-2.4	0.9-3.1	1.2-3.1	1.2-3.7	1.8-4.0	2.1-4.3	2.1-4.6	
1-WAY		0.6-1.8	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.4	1.8-4.0	1.8-4.0	2.4-4.3	2.7-4.6	
150 mm RD	Tot. Press., Pa	4	6	9	12	17	21	33	48	65	
	Flow Rate, m ³ /s	0.028	0.038	0.047	0.057	0.066	0.076	0.094	0.110	0.130	
	NC	-	-	17	22	26	30	36	41	45	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.9-2.1	0.9-2.4	0.9-2.4	0.9-2.7	1.5-3.1	1.8-3.1	2.1-3.4
		3-WAY	0.3-1.2	0.6-1.8	0.9-2.4	0.9-2.7	0.9-3.1	1.2-3.1	1.5-3.4	1.8-4.0	2.1-4.3
2-WAY		0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.2-3.7	1.8-4.3	2.1-4.6	2.4-5.2	
1-WAY		0.6-1.8	0.9-2.7	0.9-3.4	1.4-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.2	
175 mm RD or 150 x 150	Tot. Press., Pa	4	7	10	14	18	23	37	52	71	
	Flow Rate, m ³ /s	0.038	0.050	0.064	0.076	0.090	0.102	0.127	0.151	0.177	
	NC	-	13	19	24	28	32	38	43	47	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.7	0.9-3.1	1.2-3.1	1.2-3.4	1.8-3.7	2.4-4.0	2.7-4.3
		3-WAY	0.3-1.5	0.6-2.1	0.9-3.1	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.9	2.7-5.2
2-WAY		0.3-1.8	0.6-2.7	0.9-3.4	1.2-3.7	1.5-4.3	1.5-4.6	2.1-5.2	2.7-5.5	3.1-6.1	
1-WAY		0.6-2.4	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.4-4.6	2.7-5.2	3.4-5.5	3.7-6.1	
200 mm RD	Tot. Press., Pa	4	6	10	14	19	24	38	54	74	
	Flow Rate, m ³ /s	0.050	0.066	0.083	0.099	0.116	0.132	0.165	0.198	0.231	
	NC	-	16	22	27	31	35	41	46	50	
	Throw, m	4-WAY	0.3-1.8	0.6-2.4	1.2-3.1	1.2-3.4	1.2-3.7	1.5-3.7	1.8-4.0	2.4-4.3	2.7-4.9
		3-WAY	0.3-1.8	0.6-2.4	1.2-3.4	1.2-4.0	1.5-4.0	1.5-4.3	2.1-4.9	2.7-5.5	3.1-5.8
2-WAY		0.3-2.1	0.6-3.1	1.2-3.7	1.2-4.3	1.5-4.6	1.8-5.2	2.4-5.8	3.1-6.4	3.7-6.7	
1-WAY		0.9-2.7	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.6	2.4-5.2	3.1-5.8	4.0-6.4	4.0-6.7	
250 mm RD or 200 x 200	Tot. Press., Pa	5	8	13	18	24	31	49	70	95	
	Flow Rate, m ³ /s	0.078	0.104	0.127	0.153	0.179	0.205	0.257	0.309	0.359	
	NC	11	19	25	30	34	38	44	49	53	
	Throw, m	4-WAY	0.3-2.4	0.6-3.1	1.2-3.7	1.2-4.0	1.8-4.3	2.1-4.3	2.4-5.2	3.1-5.5	3.4-6.1
		3-WAY	0.3-2.4	0.6-3.1	1.2-4.0	1.8-4.6	2.1-5.2	2.1-5.5	2.7-6.1	3.4-6.7	3.7-7.0
2-WAY		0.3-2.7	0.6-3.7	1.2-4.3	1.8-5.5	2.1-5.8	2.4-6.4	3.1-7.0	3.7-7.6	4.3-8.5	
1-WAY		0.9-3.4	1.2-4.3	1.2-5.2	2.4-5.5	2.7-5.8	3.1-6.4	3.7-7.0	4.6-7.6	4.6-8.5	
300 mm RD	Tot. Press., Pa	6	10	15	22	30	38	60	85	116	
	Flow Rate, m ³ /s	0.111	0.149	0.184	0.222	0.260	0.297	0.371	0.446	0.516	
	NC	14	22	28	33	37	41	47	52	56	
	Throw, m	4-WAY	0.6-2.1	0.9-3.7	1.5-4.3	1.5-4.9	1.8-5.2	2.1-5.5	2.7-6.1	3.7-6.4	4.3-7.0
		3-WAY	0.6-3.1	0.9-4.0	1.5-4.9	1.8-5.5	2.1-6.1	2.4-6.4	3.4-7.0	4.0-8.2	4.6-8.5
2-WAY		0.6-3.4	0.9-4.6	1.5-5.5	2.1-6.1	2.4-7.0	2.7-7.6	3.7-8.5	4.6-9.5	5.2-10.1	
1-WAY		0.9-4.3	1.5-5.5	2.1-6.1	2.4-6.4	3.4-7.0	3.4-7.6	4.6-8.5	5.5-9.5	9.5-10.1	
350 mm RD	Tot. Press., Pa	8	13	20	29	38	49	77	110	151	
	Flow Rate, m ³ /s	0.151	0.201	0.250	0.300	0.349	0.401	0.500	0.600	0.699	
	NC	19	27	38	38	42	46	52	57	61	
	Throw, m	4-WAY	0.6-3.1	1.2-4.0	1.8-4.9	1.8-5.5	2.1-5.8	2.4-6.1	3.4-7.0	4.0-7.3	4.9-7.9
		3-WAY	0.6-3.4	1.2-4.3	1.8-5.5	2.1-6.1	2.4-7.0	3.1-7.3	3.7-7.9	4.3-9.2	5.2-9.5
2-WAY		0.9-3.7	1.2-5.2	1.8-6.1	2.4-7.0	3.1-7.9	3.4-8.8	4.0-9.5	5.2-10.7	5.8-11.3	
1-WAY		1.2-4.9	1.8-6.1	2.4-7.0	3.1-7.3	3.7-7.9	4.0-8.8	5.2-9.5	6.1-10.7	6.7-11.3	
250 x 250	Tot. Press., Pa	6	9	15	21	28	36	56	80	109	
	Flow Rate, m ³ /s	0.099	0.132	0.165	0.196	0.229	0.262	0.328	0.394	0.460	
	NC	13	21	27	32	36	40	46	51	55	
	Throw, m	4-WAY	0.6-2.4	0.9-3.4	1.5-4.0	1.5-4.6	1.8-4.9	2.1-5.2	2.7-5.8	3.4-6.1	4.0-6.7
		3-WAY	0.6-2.7	0.9-3.7	1.5-4.6	1.8-5.2	2.1-5.8	2.4-6.1	3.1-6.7	3.7-7.6	4.3-7.9
2-WAY		0.6-3.1	0.9-4.3	1.5-5.2	2.1-5.8	2.4-6.7	2.7-7.3	3.4-7.9	4.3-8.8	4.9-9.5	
1-WAY		0.9-4.0	1.5-5.2	2.1-6.8	2.4-6.1	3.1-6.7	3.4-7.3	4.3-7.9	5.2-8.8	5.5-9.5	
* 450 x 450	Neg Stat. Press., Pa	8	13	19	28	39	50	78	113	154	
	Flow Rate, m ³ /s	0.319	0.425	0.529	0.637	0.746	0.850	1.060	1.270	1.490	
	NC	10	19	26	32	37	41	48	55	60	

* performance data for CPR.

600 x 600 Module Size

Duct Size	Neck Velocity, m/s Vel. Press., Pa	1.53 2	2.04 3	2.55 4	3.06 6	3.57 8	4.08 10	5.1 16	6.12 23	7.14 31	
125 mm RD	Tot. Press., Pa	3	5	7	10	14	18	28	40	54	
	Flow Rate, m ³ /s	0.019	0.026	0.033	0.038	0.045	0.052	0.064	0.078	0.090	
	NC	-	-	14	19	23	27	33	38	42	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.6-1.8	0.6-2.1	0.9-2.1	0.9-2.4	1.5-2.7	1.8-3.1	1.8-3.1
		3-WAY	0.3-1.2	0.6-1.8	0.6-2.1	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.1	1.8-3.7	1.8-4.0
2-WAY		0.3-1.5	0.6-1.8	0.6-2.4	0.9-3.1	1.2-3.1	1.2-3.7	1.8-4.0	2.1-4.3	2.1-4.6	
1-WAY		0.6-1.8	0.6-2.4	0.9-2.7	1.2-3.1	1.5-3.4	1.8-4.0	1.8-4.0	2.4-4.3	2.7-4.6	
150 mm RD	Tot. Press., Pa	4	6	9	12	17	21	33	48	65	
	Flow Rate, m ³ /s	0.028	0.038	0.047	0.057	0.066	0.076	0.094	0.110	0.130	
	NC	-	-	17	22	26	30	36	41	45	
	Throw, m	4-WAY	0.3-1.2	0.6-1.5	0.9-2.1	0.9-2.4	0.9-2.4	0.9-2.7	1.5-3.1	1.8-3.1	2.1-3.4
		3-WAY	0.3-1.2	0.6-1.8	0.9-2.4	0.9-2.7	0.9-3.1	1.2-3.1	1.5-3.4	1.8-4.0	2.1-4.3
2-WAY		0.3-1.5	0.6-2.1	0.9-2.7	0.9-3.1	1.2-3.4	1.2-3.7	1.8-4.3	2.1-4.6	2.4-5.2	
1-WAY		0.6-1.8	0.9-2.7	0.9-3.4	1.2-3.4	1.5-3.7	1.8-4.0	2.1-4.6	2.7-4.9	3.1-5.2	
175 mm RD or 150 x 150	Tot. Press., Pa	4	6	10	14	18	23	37	52	71	
	Flow Rate, m ³ /s	0.038	0.050	0.064	0.076	0.090	0.102	0.127	0.151	0.177	
	NC	-	13	19	24	28	32	38	43	47	
	Throw, m	4-WAY	0.3-1.5	0.6-1.8	0.9-2.7	0.9-3.1	1.2-3.1	1.2-3.4	1.8-3.7	2.4-4.0	2.7-4.3
		3-WAY	0.3-1.5	0.6-2.1	0.9-3.1	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.9	2.7-5.2
2-WAY		0.3-1.8	0.6-2.7	0.9-3.4	1.2-3.7	1.5-4.3	1.5-4.6	2.1-5.2	2.7-5.5	3.1-6.1	
1-WAY		0.6-2.4	0.9-3.4	1.2-3.7	1.5-4.0	1.8-4.3	2.4-4.6	2.7-5.2	3.4-5.5	3.7-6.1	
200 mm RD	Tot. Press., Pa	4	6	10	14	19	24	38	54	74	
	Flow Rate, m ³ /s	0.050	0.066	0.083	0.099	0.116	0.132	0.165	0.198	0.231	
	NC	-	17	23	28	32	36	42	47	51	
	Throw, m	4-WAY	0.3-1.8	0.6-2.4	1.2-3.1	1.2-3.4	1.2-3.7	1.5-4.0	1.8-4.0	2.4-4.3	2.7-4.9
		3-WAY	0.3-1.8	0.6-2.4	1.2-3.4	1.2-4.0	1.5-4.0	1.5-4.3	2.1-4.9	2.7-5.5	3.1-5.8
2-WAY		0.3-2.1	0.6-3.1	1.2-3.7	1.2-4.3	1.5-4.6	1.8-5.2	2.4-5.8	3.1-6.4	3.7-6.7	
1-WAY		0.9-2.7	1.2-3.7	1.5-4.0	1.8-4.3	2.1-4.6	2.4-5.2	3.1-5.8	4.0-6.4	4.0-6.7	
250 mm RD or 200 x 200	Tot. Press., Pa	4	7	11	16	21	28	43	61	83	
	Flow Rate, m ³ /s	0.078	0.104	0.127	0.153	0.179	0.205	0.257	0.309	0.359	
	NC	11	19	25	30	34	38	44	49	53	
	Throw, m	4-WAY	0.3-2.4	0.6-3.1	1.2-3.7	1.2-4.0	1.8-4.3	2.1-4.3	2.4-5.2	3.1-5.5	3.4-6.1
		3-WAY	0.3-2.4	0.6-3.1	1.2-4.0	1.8-4.6	2.1-5.2	2.1-5.5	2.7-6.1	3.4-6.7	3.7-7.0
2-WAY		0.3-2.7	0.6-3.7	1.2-4.3	1.8-5.5	2.1-5.8	2.4-6.4	3.1-7.0	3.7-7.6	4.3-8.5	
1-WAY		0.3-3.4	1.2-4.3	2.1-5.2	2.4-5.5	2.7-5.8	3.1-6.4	3.7-7.0	4.6-7.6	4.6-8.5	
300 mm RD or 250 x 250	Tot. Press., Pa	5	9	14	19	26	33	52	75	102	
	Flow Rate, m ³ /s	0.111	0.149	0.184	0.222	0.260	0.297	0.371	0.446	0.519	
	NC	14	22	28	33	37	41	47	52	56	
	Throw, m	4-WAY	0.6-2.4	0.9-3.7	1.5-4.3	1.5-4.9	1.8-5.2	2.1-5.5	2.7-6.1	3.7-6.4	4.3-7.0
		3-WAY	0.6-3.1	0.9-4.0	1.5-4.9	1.8-5.5	2.1-6.1	2.4-6.4	3.4-7.0	4.0-8.2	4.6-8.5
2-WAY		0.6-3.4	0.9-4.6	1.5-5.5	2.1-6.1	2.4-7.0	2.7-7.6	3.7-8.5	4.6-9.5	5.2-10.1	
1-WAY		0.9-4.3	1.5-5.5	2.1-6.1	2.4-6.4	3.4-7.0	3.4-7.6	4.6-8.5	5.5-9.5	9.5-10.1	
350 mm RD	Tot. Press., Pa	6	10	16	22	28	39	61	86	118	
	Flow Rate, m ³ /s	0.151	0.201	0.250	0.300	0.349	0.401	0.500	0.600	0.699	
	NC	16	24	30	35	39	43	49	54	58	
	Throw, m	4-WAY	0.6-3.1	1.2-4.0	1.8-4.9	1.8-5.5	2.1-5.8	2.4-6.1	3.4-7.0	4.0-7.3	4.9-7.9
		3-WAY	0.6-3.4	1.2-4.3	1.8-5.5	2.1-6.1	2.4-7.0	3.1-7.3	3.7-7.9	4.3-9.2	5.2-9.5
2-WAY		0.9-3.7	1.2-5.2	1.8-6.1	2.4-7.0	3.1-7.9	3.4-8.8	4.0-9.5	5.2-10.7	5.8-11.3	
1-WAY		1.2-4.9	1.8-6.1	2.4-7.0	3.1-7.3	3.7-7.9	4.0-8.8	5.2-9.5	6.1-10.7	6.7-11.3	
400 mm RD	Tot. Press., Pa	8	12	19	28	37	48	75	108	147	
	Flow Rate, m ³ /s	0.198	0.264	0.331	0.397	0.463	0.529	0.661	0.793	0.924	
	NC	19	27	33	38	42	46	52	57	58	
	Throw, m	4-WAY	0.6-3.7	1.5-4.6	1.8-5.8	2.4-6.1	2.7-6.4	3.4-7.3	4.0-7.9	4.6-8.5	5.5-9.5
		3-WAY	0.9-3.7	1.5-5.2	1.8-6.1	2.4-7.6	2.7-7.9	3.4-8.5	4.3-9.8	5.2-10.4	5.8-11.6
2-WAY		1.2-4.3	1.5-5.8	1.8-7.3	2.7-8.5	3.4-9.5	4.0-10.1	4.6-11.3	5.8-12.2	6.4-13.4	
1-WAY		1.5-5.5	2.4-7.3	2.7-7.9	3.4-8.5	4.0-9.5	4.6-10.1	5.8-11.3	7.3-12.2	7.6-13.4	
300 x 300	Tot. Press., Pa	6	10	15	21	29	37	58	83	113	
	Flow Rate, m ³ /s	0.142	0.189	0.236	0.283	0.331	0.378	0.472	0.567	0.661	
	NC	16	24	30	35	39	43	49	54	58	
	Throw, m	4-WAY	0.6-3.1	1.2-4.0	1.5-4.9	2.1-5.2	2.4-5.5	2.7-6.1	3.4-6.7	4.0-7.3	4.6-7.9
		3-WAY	0.6-3.1	1.2-4.3	1.5-5.2	2.1-6.4	2.4-6.7	2.7-7.3	3.7-8.2	4.3-8.8	4.9-9.8
2-WAY		0.6-3.7	1.2-4.9	1.5-6.1	2.4-7.3	2.7-7.9	3.4-8.5	4.0-9.5	4.9-10.4	5.5-11.3	
1-WAY		1.2-4.6	2.1-6.1	2.4-6.7	3.1-7.3	3.4-7.9	4.0-8.5	4.9-9.5	6.1-10.4	6.4-11.3	
* 550 x 550	Neg Stat. Press., Pa	8	13	19	28	39	50	78	113	154	
	Flow Rate, m ³ /s	0.472	0.637	0.793	0.954	1.100	1.270	1.590	1.900	2.220	
	NC	11	20	27	33	38	42	49	56	61	

* performance data for CPR.

CPR, CPS, CPMS, CPSHS, CPSS, CPT & CPTR

Product Ordering Key and Suggested Specifications

CPS CPR	–	600 x 600	–	300 x 300/300 DIA	–	OPTIONS	–	ACCESSORIES	–	FINISH
Ceiling Perforated Supply. Ceiling Perforated Return.		Plenum Adaptor Size (Ceiling Opening).		Nominal Neck Size/ Nominal Neck Diameter.		OBD-2 Opposed Blade Damper / Heavy Gauge Galvanised Perforated Plate.		SRA 300 x 300/ 250 DIA. Square to Round Adaptor.		Holyoake White. Powder Coat.

Ceiling Perforated diffusers shall be Holyoake Series CPS, or CPR and shall consist of an extruded aluminium frame with close mitred corners and 0.75 mm aluminium perforated face in an extruded aluminium sub-frame. The face shall be removable, by means of a separate mounting frame, which if used for supply air shall be furnished with field adjustable pattern control louvers and a galvanised steel plenum with duct connection. All shall be as manufactured by Holyoake.

CPMS	–	200 x 200	–	FINISH
Ceiling Perforated Maximum Security.		Neck Size.		304 Stainless Steel Mill

Ceiling Perforated Maximum Security Grilles (CPMS) shall be constructed of Stainless Steel type 304 for easy wash down. The faceplate shall be constructed from a single piece with 2mm holes, with no ledges or face fixings. They shall be tested to ASTM F254 and meet a minimum grade 2 rating. All shall be as manufactured by Holyoake.

CPSHS	–	200 x 200	–	FINISH
Ceiling Perforated Supply High Secure.		Neck Size.		304 Grade Stainless Steel Mill Finish.

Ceiling Perforated Supply High Secure diffusers shall be Holyoake Series CPSHS. These shall be constructed from a single piece of Stainless Steel 304 Grade face plate, with small 2mm diameter holes, with no ledges, or face fixings. Complete with a long welded neck sleeve for full floor penetration and neck clamping flanges, ensuring no face fixings are required. All shall be as manufactured by Holyoake.

CPSS	–	600 x 600	–	2 3	–	ACCESSORIES	–	FINISH
Ceiling Perforated Supply Secure.		Nominal Neck Size.		Perforated Hole Size and Plate Thickness.		SSA, SRA & RRA Neck Adaptors, Premi-Aire™, or Galvanised Cushion Head Boxes.		Holyoake White. Powder Coat.

Ceiling Perforated Supply Secure diffusers shall be Holyoake Series CPSS and shall be constructed from heavy section aluminium surround to provide maximum security. 2 or 3 mm thick steel plate shall provide 30, or 40 % free area. Finished in a durable Powder Coat. All shall be as manufactured by Holyoake.

Note Seismic restraints are required, but not supplied.