

# CPSHS – Perforated Secure Diffuser

## Model: CPSHS

The Holyoake Series CPSHS range of Perforated Supply High Secure Diffusers has been designed to provide a medium to high level of security, for “At Risk” and “High Secure” areas within Prisons, Detention Centres and Holding Cells.

The CPSHS is manufactured from Stainless Steel Type 304, for easy wash down and is fitted with a single piece construction face plate. This ensures no ledges and with a long welded sleeve with neck clamping flanges, eliminates the need for face fixings. Coupled with the small 2 mm diameter holes, the Holyoake CPSHS has all the attributes “High Secure” areas demand.

### Construction

The Series CPSHS comprises of a 1.2 mm thick perforated stainless steel one piece diffusion face plate, with integral seamless 25 mm flange, mounted in a long, welded, stainless steel sleeve, with neck clamping flanges and a 1.6 mm rear cross bar, spot welded to the rear of the diffuser, for added strength and security.

### Installation

The CPSHS must be fixed from the rear for maximum security, using the neck clamping plates to sandwich the concrete floor, creating a “High Secure” fixing.

We recommend the concrete ceiling is recessed to conceal the flange edge, see below.

### Features

- Highly secure Heavy Duty construction.
- Neck clamping flanges for secure diffuser fixing.
- 1.2 mm thick perforated stainless steel diffusion plate.
- One piece construction face plate for maximum security.
- 2 mm diameter holes for 40 % free area.

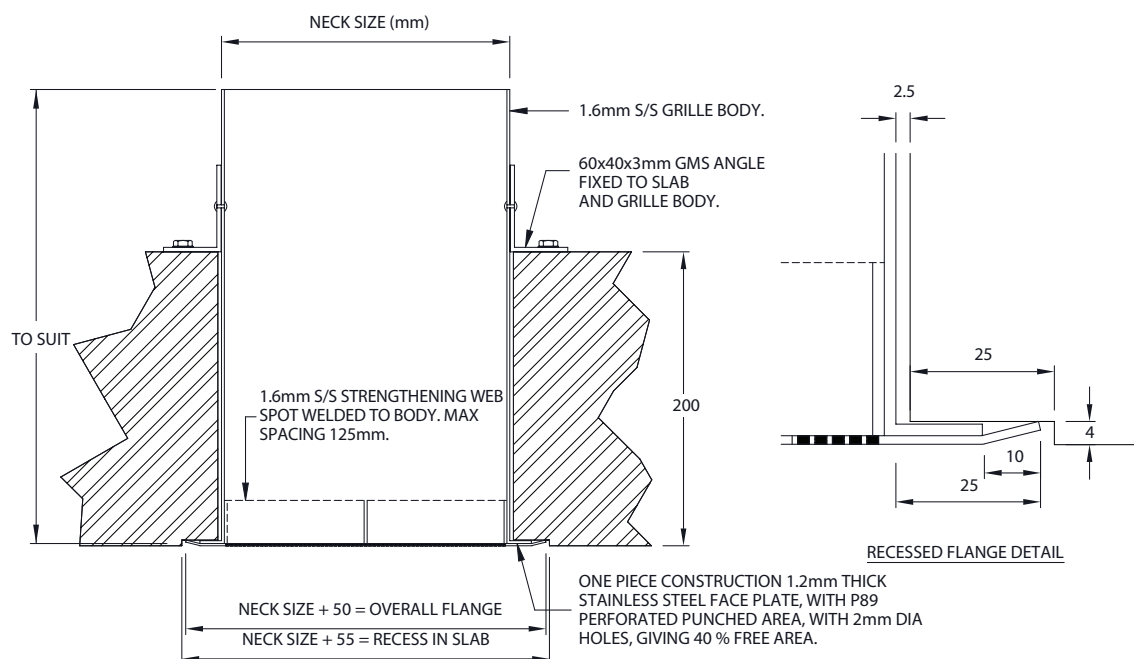
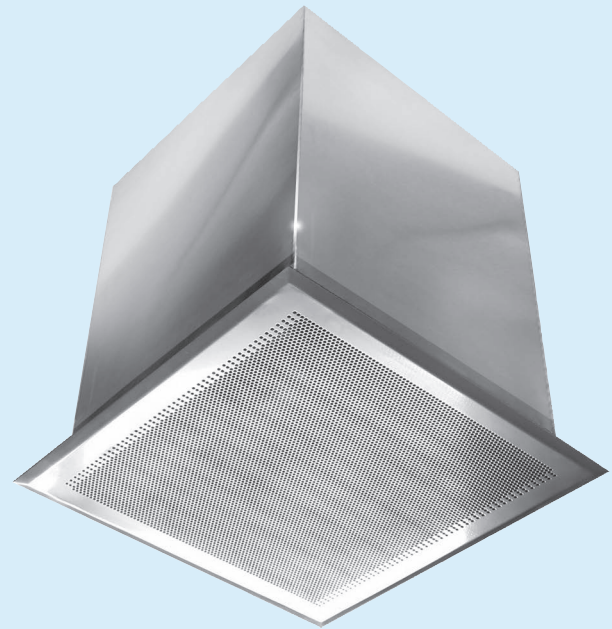
### Options

The CPSHS diffusers are available in a range of sizes, however, all are individually punched. Therefore, we recommend that sizes and quantities are discussed with your local Holyoake branch, to ensure the most cost effective solution is agreed, prior to manufacture.

### Finish

Standard, is 304 grade stainless steel Mill finish.

## CPSHS- Ceiling Perforated Supply High Secure



Neck (mm)	Flowrate (l/s)	25	50	75	100	150	200	250	300	400	500	600	700	800	900	1000
200 x 200	Vel (m/s)	0.7	1.4	2.1	2.8	4.2										
	ΔP (Pa)	4	15	35	62	139										
225 x 225	Vel (m/s)	0.5	1.1	1.6	2.2	3.2	4.3									
	ΔP (Pa)	2	9	20	36	81	143									
250 x 250	Vel (m/s)	0.4	0.9	1.3	1.7	2.6	3.5	4.3								
	ΔP (Pa)	1	6	13	22	50	89	139								
300 x 300	Vel (m/s)	0.3	0.6	0.9	1.2	1.8	2.4	3	3.6	4.8						
	ΔP (Pa)	1	2	6	10	22	39	62	89	158						
350 x 350	Vel (m/s)	0.2	0.4	0.6	0.9	1.3	1.7	2.2	2.6	3.5	4.3					
	ΔP (Pa)	0	1	3	5	11	20	31	45	80	126					
400 x 400	Vel (m/s)	0.2	0.3	0.5	0.7	1	1.3	1.6	2	2.6	3.3	3.9				
	ΔP (Pa)	0	1	2	3	6	11	18	25	45	70	102				
450 x 450	Vel (m/s)	0.1	0.3	0.4	0.5	0.8	1	1.3	1.5	2.1	2.6	3.1	3.6	4.1		
	ΔP (Pa)	0	0	1	2	4	7	11	15	27	43	61	83	109		
500 x 500	Vel (m/s)	0.1	0.2	0.3	0.4	0.6	0.8	1	1.2	1.7	2.1	2.5	2.9	3.3	3.7	4.2
	ΔP (Pa)	0	0	1	1	2	4	7	10	17	27	39	53	70	88	109

Guide Product Weights		
Description	Size	Approximate Weight in Kg.
CPSHS INC SECURE BOX	250 x 250	4.84

## Performance Notes

1. Vel (m/s) is the duct velocity.
2. Minimum size 200 x 200 neck.
3. Seismic restraints may be required, but not supplied.