

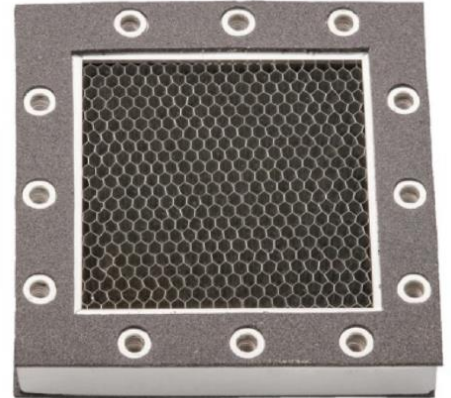
SHIELDED VENT PANELS

STANDARD PRODUCT

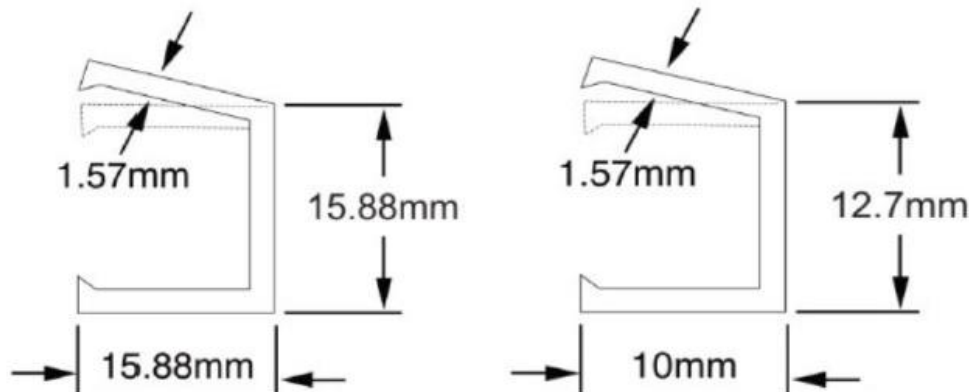
Overview/Product Description:

JHC air vent panels are constructed of aluminium honeycomb installed in an extruded aluminium frame. The 'waveguide' style construction of the honeycomb provides high EMI shielding effectiveness combined with the highest airflow of any vent medium. Standard honeycomb cell size is 3.2mm (0.125in) wide by 12.7mm (0.50in) deep.

JHC also offer shielding air vent panels constructed of two parallel aluminium honeycomb medium layers installed in an extruded aluminium frame. Each layer of honeycomb is oriented 90° to each other. This eliminates the polarisation characteristics of straight honeycomb by greatly improving shielding effectiveness (with little compromise in air flow). A standard honeycomb cell size for each layer is 3.2mm (0.125 in) wide by 6.4mm (0.25 in) deep, yielding a total thickness of 12.7mm (0.5 in). The panels may be plated for environmental protection. This construction does not require tin or nickel plating for improved shielding effectiveness.



Two types of extrusion profiles:



Key Features:

- Lightweight design
- Economical construction
- Excellent shielding performance (at 9kHz, 1MHz, 100MHz & 10GHz)
- 95% open area honeycomb for maximum airflow
- Superb array of customisation options
- Rapid prototyping
- Frame – Aluminium Alloy 6063-T1, per QQA-200/9 (ASTM-B-221)
- Honeycomb – Aluminium Alloy 5052 Grade B, per MIL-C-7438
- RoHS Compliant coatings available

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Current Applications:

- Marine: Interior panels and partitions, ceiling panels, bulkheads
- Aerospace: Aircraft leading and trailing edges, floors and fuselage components
- Architecture: Clean Rooms, Light Diffusion
- Helicopters: Rotor Blades
- Air Conditioning: Heating and Ventilation components

Honeycomb Properties:

Cell Size Inches	1"		3/4"		1/2"		3/8"		1/4"		3/16"		1/8"		1/16"	
	25.4mm		19.1mm		12.7mm		9.5mm		6.4mm		4.8mm		3.2mm		1.6mm	
Density	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³
		0.6	9.6	0.8	12.8	1.1	17.6	1.6	25.3	2.3	36.8	3.1	49.7	4.5	72.1	9.2
	1.3	20.8	1.8	28.8	2.6	41.6	3.7	59.3	5.2	83.3	6.9	110.5	10.0	160.2	16.4	262.7

Cell Size Inches	Nominal Density lb/ft ³	Compressive			Plate Shear			
		Bare	Stabilised	Crush Strength psi	L Direction		W Direction	
					Strength psi	Strength psi	Modulus ksi	Strength psi
1/16 (1.6mm)	9.2 (147 kg/m ³)	1470	1519	735	850	150	520	53
1/16 (1.6mm)	16.4 (262 kg/m ³)*	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1/8 (3.2mm)	4.5 (72.1 kg/m ³)	539	559	255	340	70	220	31
1/8 (3.2mm)	10.0 (160.2 kg/m ³)*	2058	2205	1029	980	175	550	65
3/16 (4.8mm)	3.1 (49.7 kg/m ³)	284	328	127	210	45	125	22
3/16 (4.8mm)	6.9 (110.5 kg/m ³)	1097	1152	564	590	114	375	46
1/4 (6.4mm)	2.3 (36.8 kg/m ³)	186	206	74	140	32	85	16
1/4 (6.4mm)	5.2 (83.3 kg/m ³)	676	745	328	410	82	265	35
3/8 (9.5mm)	1.6 (25.6 kg/m ³)	88	93	39	85	21	50	11
3/8 (9.5mm)	3.7 (59.3 kg/m ³)	362	402	176	250	55	160	26

Attenuation: Example		
Single Layer 3.175mm (1/8") cell with 12.5mm (1/2") thick honeycomb		
Frequency	Attenuation Horizontal	Attenuation Vertical
100MHz	70dB	25dB
500MHz	50dB	35dB
1GHz	45dB	35dB
5GHz	50dB	35dB
10GHz	55dB	40dB

