



In-Floor Chilled Beam

MODEL: **IFCB**

DESCRIPTION:

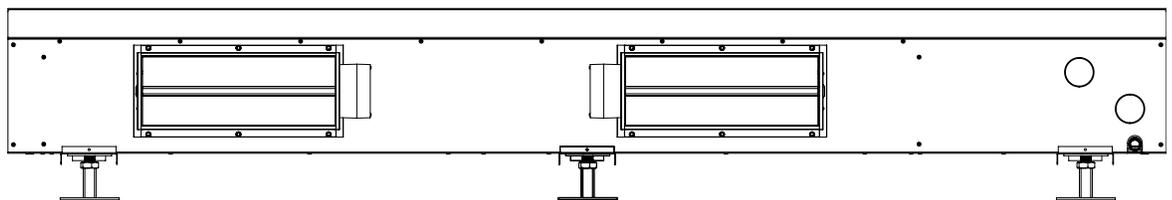
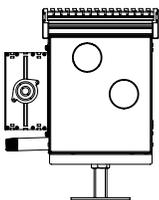
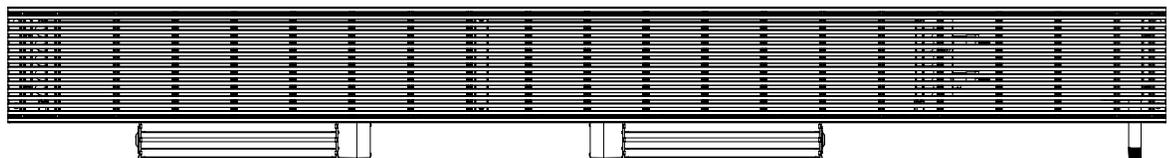
IFCB (In-Floor Chilled Beam) is a hydronic + air cooling linear diffuser package, for use in raised access floor systems. The underfloor terminal features 20 gauge (1mm) galvanized steel construction, pre-painted flat black.

The hydronic fin pack has been rated in accordance with AHRI Standard 410. Configuration is two (2) pipe, two (2) row; rows are Ø9.5mm copper tubing with 1/2" NPT (15mm I.D.) supply and return connections. Aluminum fin size and spacing, as well as overall finned length vary based on overall terminal dimensions and performance specification. Associated water control valve is field furnished and installed by others.

An IEQ double deflection drain pan extends under the entire length of the water coil / connections. The drain pan is galvanized steel, pre-painted black, and includes a 1/2" NPT (15mm I.D.) condensate drainage connection. The terminal interior (including the drain pan) is fully lined with insulation to prevent undesirable condensate formation.

Optional air valves use time modulation to vary total air supplied to a conditioned space. Air velocity is constant any time the valve is open; the short time duration between open/close cycles produces the effect of continuous air delivered to the occupied space. They are rated for 24V (18-30VAC) operation; one (1) PAP-1 Plug & Play Cable is included per air valve. Optional extended high performance air valves are available (specify on order).

The linear grille is available as extruded aluminum or stainless steel, in a variety of sizes and configurations. In addition to a natural aluminum finish options, ten (10) standard powder-coated colors are available. Custom colors and finishes can be provided to match architectural design (specify on order).

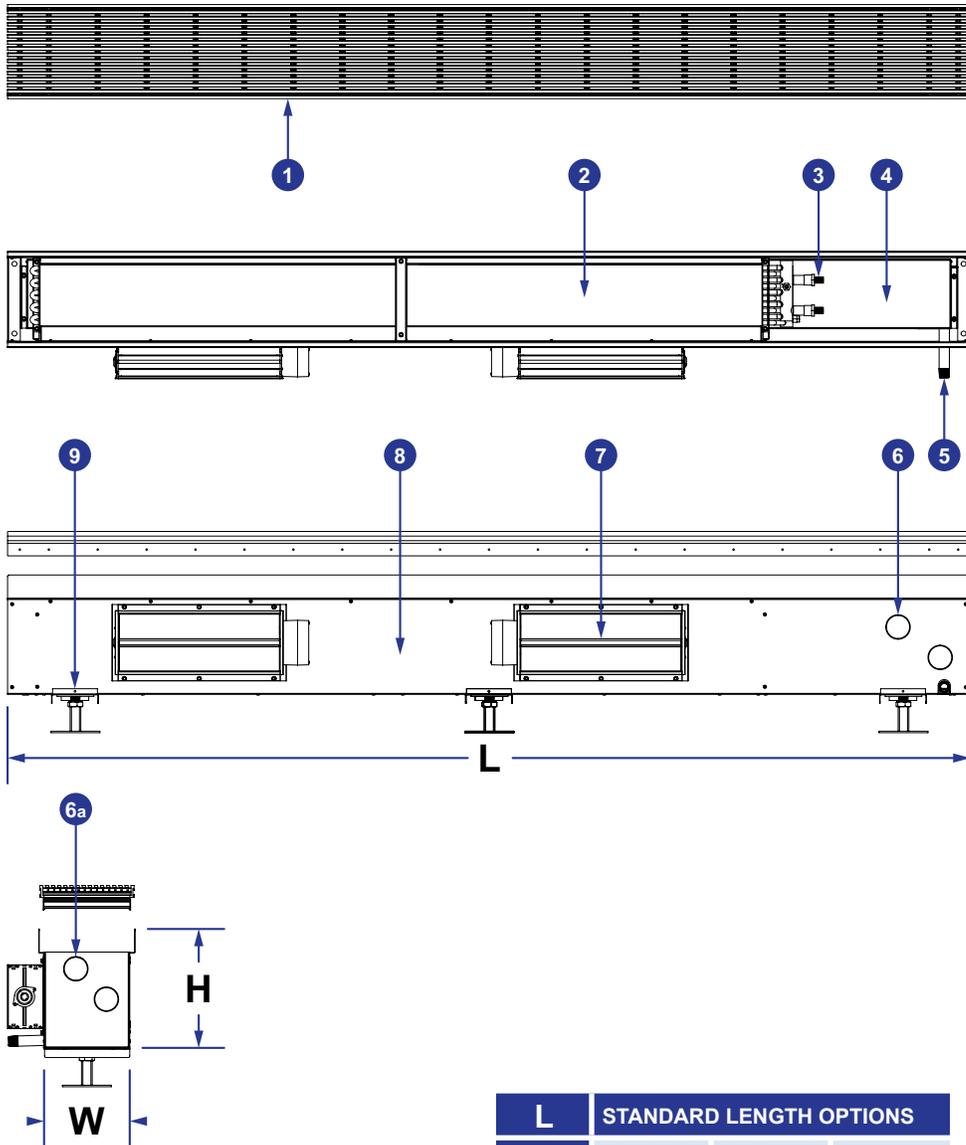


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IFCB

MODEL:

UNIT DETAIL:



- 1. Linear grille
(optional extruded aluminum or stainless steel; specify on order)
- 2. Hydronic cooling fin pack
(2-Row / 2-Pipe)
- 3. 1/2" NPT (15mm I.D.) water supply / return connections
- 4. IEQ double deflection drain pan
- 5. 1/2" NPT (15mm I.D.) condensate drainage connection
- 6. Piping connection access
- 6a. Alternate piping connection access (specify on order)
- 7. Variable volume air valves
- 8. 20 gauge (1mm) galvanized steel casing, pre-painted black
- 9. Support pedestals / brackets on nominal 914mm centers

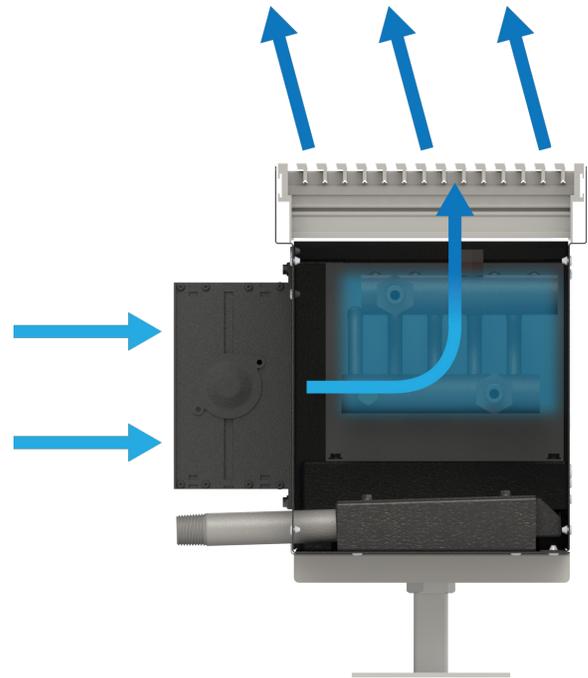
L	STANDARD LENGTH OPTIONS		
mm	1200	1600	2000
W	STANDARD WIDTH OPTIONS		
mm	200	250	
H	STANDARD HEIGHT OPTIONS		
mm	200	250	
ALL DIMENSIONS NOMINAL ± 2.5mm			

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MODEL: IFCB

COOLING SEQUENCE:

The thermostat detects a cooling condition and the aquastat detects chilled water: the control box will begin to time modulate the air valves and open the water valve. Chilled water flows through the coil, and air passes through the unit in a time modulation of six second full open bursts. Once the thermostat detects that the occupied space has reached set point, the system will return to suspend mode, closing the air and water valves awaiting further system demands.



FEATURES:

- 20 gauge (1mm) galvanized steel terminal housing, pre-painted flat black
 - Optional 19mm support flanges (specify on order)
- Multiple linear grille options available (specify on order)
 - Extruded aluminum / stainless steel (304 / 316 Series)
 - Flanged or flangeless configurations
 - Natural aluminum finish options or ten (10) standard powder-coated colors; additional colors and finishes available at architect's choice
- Variable volume air valves (maximum size / number of air valves based on unit length)
 - DC synchronized magnetic motor
 - Factory programmed multi-function circuit board for varying control strategies
 - Modular Plug & Play power and control connections
- Adjustable support pedestals / brackets
 - Brackets factory mounted, spaced on nominal 914mm centers
 - Pedestals factory furnished loose for field installation
- Hydronic fin pack (performance rated in accordance with AHRI Standard 410)
 - Variable finned length (based on terminal length and performance specification)
 - 2-Row / 2-Pipe configuration
 - Ø9.5mm copper rows
 - 1/2" NPT (15mm I.D.) supply / return chilled water connections
- IEQ double deflection drain pan
 - 1/2" NPT (15mm I.D.) drainage connection
- Terminal interior (including drain pan) fully lined with ArmaFlex (style) flexible closed cell insulation



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SPECIFICATIONS:

Application: Underfloor Hydronic Cooling | Raised Access Floor Systems

Terminal Construction: Galvanized Steel | 20 Gauge (1mm) | Pre-Painted Black

Terminal Dimensions: Length: 1200mm | 1600mm | 2000mm
Width: 200mm | 250mm
Height: 200mm | 250mm

Specify Dimensions on Order

Air Flow Capacity:
(Nominal Maximum)

1200mm Terminal | (1x) Standard Air Valve | 255 m³/hr @ 12.5 Pa
(1x) Extended Air Valve | 510 m³/hr @ 12.5 Pa

1600mm Terminal | (2x) Standard Air Valve | 510 m³/hr @ 12.5 Pa
(1x) Standard + (1x) Extended Air Valve | 765 m³/hr @ 12.5 Pa
(2x) Extended Air Valve | 1020 m³/hr @ 12.5 Pa

2000mm Terminal | (2x) Standard Air Valve | 510 m³/hr @ 12.5 Pa
(1x) Standard + (1x) Extended Air Valve | 765 m³/hr @ 12.5 Pa
(2x) Extended Air Valve | 1020 m³/hr @ 12.5 Pa

Cooling Capacity: Refer to “Example Performance Selections” for Example Capacities

Grille Configuration: Extruded Aluminum | Natural Anodized / Powder-Coated Finish
Fully Flanged / Partially Flanged / Fully Flangeless
Stainless Steel | 304 / 316 Series Finish
Fully Framed / Fully Frameless
Specify Grille Configuration Options On Order

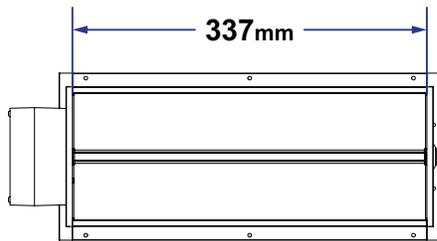
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MODEL:

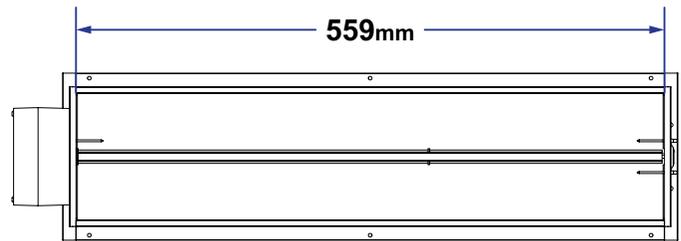
AIR VALVE DETAIL:

STANDARD CAPACITY



255 m³/hr @ 12.5 Pa
(Nominal Maximum per Valve)

EXTENDED HIGH CAPACITY



510 m³/hr @ 12.5 Pa
(Nominal Maximum per Valve)

Various combinations of air valves are used to achieve required air flow capacities.

EXAMPLE #1: (1x) Standard + (1x) Extended = 765 m³/hr @ 12.5 Pa (Total Nominal Maximum)

EXAMPLE #2: (2x) Extended = 1020 m³/hr @ 12.5 Pa (Total Nominal Maximum)

NOTE: Maximum size and number of air valves is limited based on overall length of the terminal.

EXAMPLE PERFORMANCE SELECTIONS:

1200mm TERMINAL							
AIRFLOW	AIR COOLING CAPACITY	LEAVING AIR TEMPERATURE	AIR TEMPERATURE	WATER FLOW RATE	WATER INLET TEMPERATURE	WATER TEMPERATURE	WATER PRESSURE DROP
(m ³ /hr @ 12.5 Pa)	(W)	(°C)	(ΔT)	(LPM)	(°C)	(ΔT)	(ΔP)
(1x) STANDARD AIR VALVE							
255	919	13.3	10.7	7	10.0	0.8	1541
	868	13.9	10.1		11.0	0.7	
	816	14.5	9.5		12.0	0.6	
	773	15.0	9.0		13.0	0.5	
	722	15.6	8.4		14.0	0.4	
(1x) EXTENDED AIR VALVE							
510	1615	14.6	9.4	7	10.0	1.2	1541
	1547	15.0	9.0		11.0	1.1	
	1478	15.4	8.6		12.0	0.9	
	1409	15.8	8.2		13.0	0.8	
	1340	16.2	7.8		14.0	0.6	

NOTE: Standard ratings based on 12.5 Pa plenum pressure, 7 lpm, 18°C db Inlet Air @ 60% RH, and 24°C db room.



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MODEL:

EXAMPLE PERFORMANCE SELECTIONS:

1600mm TERMINAL							
AIRFLOW	AIR COOLING CAPACITY	LEAVING AIR TEMPERATURE	AIR TEMPERATURE	WATER FLOW RATE	WATER INLET TEMPERATURE	WATER TEMPERATURE	WATER PRESSURE DROP
(12.5 Pa)	(W)	(°C)	(ΔT)	(LPM)	(°C)	(ΔT)	(ΔP)
(2x) STANDARD AIR VALVE							
510	1701	14.1	9.9	7	10.0	1.4	1736
	1615	14.6	9.4		11.0	1.2	
	1529	15.1	8.9		12.0	1.0	
	1461	15.5	8.5		13.0	0.9	
	1375	16.0	8.0		14.0	0.7	
(1x) STANDARD + (1x) EXTENDED AIR VALVE							
765	2346	14.9	9.1	7	10.0	1.7	1736
	2268	15.2	8.8		11.0	1.5	
	2165	15.6	8.4		12.0	1.3	
	2062	16.0	8.0		13.0	1.1	
	1959	16.4	7.6		14.0	0.9	
(2x) EXTENDED AIR VALVE							
1020	2990	15.3	8.7	7	10.0	1.9	1736
	2853	15.7	8.3		11.0	1.7	
	2749	16.0	8.0		12.0	1.4	
	2646	16.3	7.7		13.0	1.2	
	2543	16.6	7.4		14.0	1.0	

NOTE: Standard ratings based on 12.5 Pa plenum pressure, 7 lpm, 18°C db Inlet Air @ 60% RH, and 24°C db room.



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IFCB

MODEL:

EXAMPLE PERFORMANCE SELECTIONS:

1600mm TERMINAL							
AIRFLOW	AIR COOLING CAPACITY	LEAVING AIR TEMPERATURE	AIR TEMPERATURE	WATER FLOW RATE	WATER INLET TEMPERATURE	WATER TEMPERATURE	WATER PRESSURE DROP
(12.5 Pa)	(W)	(°C)	(ΔT)	(LPM)	(°C)	(ΔT)	(ΔP)
(2x) STANDARD AIR VALVE							
510	1753	13.8	10.2	7	10.0	1.5	1868
	1667	14.3	9.7		11.0	1.3	
	1581	14.8	9.2		12.0	1.1	
	1495	15.3	8.7		13.0	0.9	
	1392	15.9	8.1		14.0	0.8	
(1x) STANDARD + (1x) EXTENDED AIR VALVE							
765	2423	14.6	9.4	7	10.0	1.8	1868
	2320	15.0	9.0		11.0	1.6	
	2217	15.4	8.6		12.0	1.4	
	2114	15.8	8.2		13.0	1.2	
	2011	16.2	7.8		14.0	0.9	
(2x) EXTENDED AIR VALVE							
1020	3059	15.1	8.9	7	10.0	2.1	1868
	2956	15.4	8.6		11.0	1.8	
	2818	15.8	8.2		12.0	1.6	
	2715	16.1	7.9		13.0	1.3	
	2578	16.5	7.5		14.0	1.1	

NOTE: Standard ratings based on 12.5 Pa plenum pressure, 7 lpm, 18°C db Inlet Air @ 60% RH, and 24°C db room.



In-Floor Chilled Beam

IFCB

MODEL:

IFCB - 200 - 1200 - 200 - 00 - 2R - 1 VS

PRODUCT DESCRIPTION
In Floor Chilled Beam

TERMINAL WIDTH
200 = 200mm
250 = 250mm

TERMINAL LENGTH
1200 = 1200mm
1600 = 1600mm
2000 = 2000mm

TERMINAL HEIGHT
200 = 200mm
250 = 250mm

OPENING DESCRIPTION
VS = Standard Air Valve
VL = Extended Air Valve

AIR FLOW OPENINGS
1 = One (1) Opening
2 = Two (2) Openings

FIN PACK OPTIONS
2R = Two (2) Row Hydronic Fin Pack

TERMINAL FLANGE CONFIGURATION
00 = Fully Flangeless
20 = Two (2) Flanges (Sides Only)
3L = Three (3) Flanges (Sides + Left End)
3R = Three (3) Flanges (Sides + Right End)
40 = Four (4) Flanges (All Sides + Ends)