

GLOBAL IFS[®]

Underfloor Air Distribution System

Hyper Heat Terminal (HHT)



SYSTEM OVERVIEW

The Hyper Heater Terminal (HHT) is a premium linear floor grille with integrated heat, designed for raised floor applications and ideal for perimeter ventilation.

Using the HHT allows for conditioning of the perimeter zone without the use of an underfloor fan terminal. Extruded aluminum bars provide crisp styling and exceptional strength. The HHT incorporates a heater for perimeter heating in a compact, drop-in steel plenum to enclose all components. In addition to having various grille style options, these terminal units can be configured in either discrete or continuous applications.

Features

- 24 VAC modulating actuator for damper control
- Plug-and-play connection with daisy chain wiring
- Supplied with heavy duty grille, made with high quality extruded aluminum bars and border
- Choice of deflection angle and blade spacing
- Pencil and high-heel proof spacing available
- Counter-sunk screw and spring clip fastening available
- Plenum rated modular cable provided for simple connection to the Global IFS underfloor system

Performance Tested

The HHT assembly is rigorously tested and validated in an underfloor application.

The HHT series is tested in accordance with ASHRAE 70-2006.

Control enclosure and electric heater are ETL certified.

Modular Design

The HHT heaters are integral components of the Global IFS UFAD System. See Perimeter Zone Details on page 10 of this catalog for example applications and control solutions.

The drop-in plenum design and plug-and-play wiring allow for increased flexibility and ease of installation.

Both power and control signals delivered to each unit via a single daisy chained cable, with up to six units in series.

Flexibility in Design

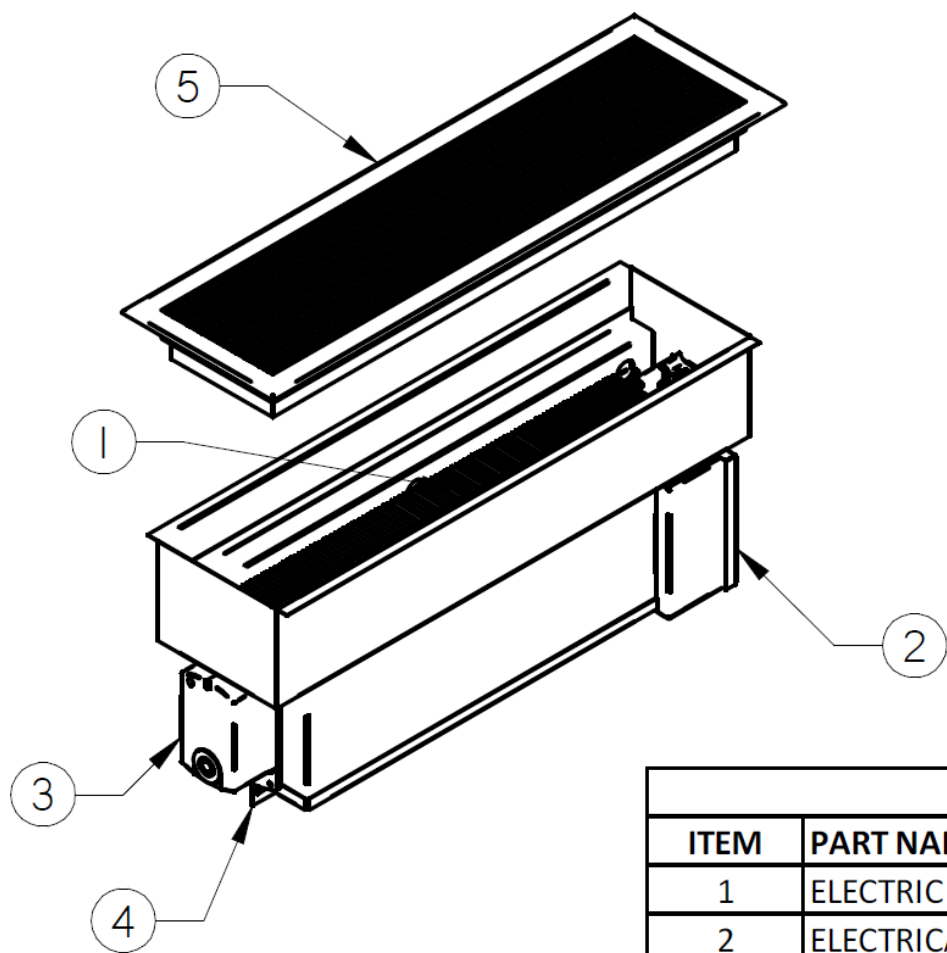
Hot water and electric coils available.

Options include various border styles, core configurations and constructions, fastening methods and directional vanes.

PRODUCT APPLICATION

The HHT is perfectly suited to corridors and large windows where higher airflows and heating capacities are required. The HHT is recessed into the raised floor plenum and is designed to handle regular foot traffic. This makes it well suited for offices, lobbies, schools and universities with raised floor or trench systems along the perimeter. Due to its modular nature and ability to work with other VAV floor devices with Global IFS controllers, the HHT is also commonly used in conference rooms and offices where supplemental heat is necessary.

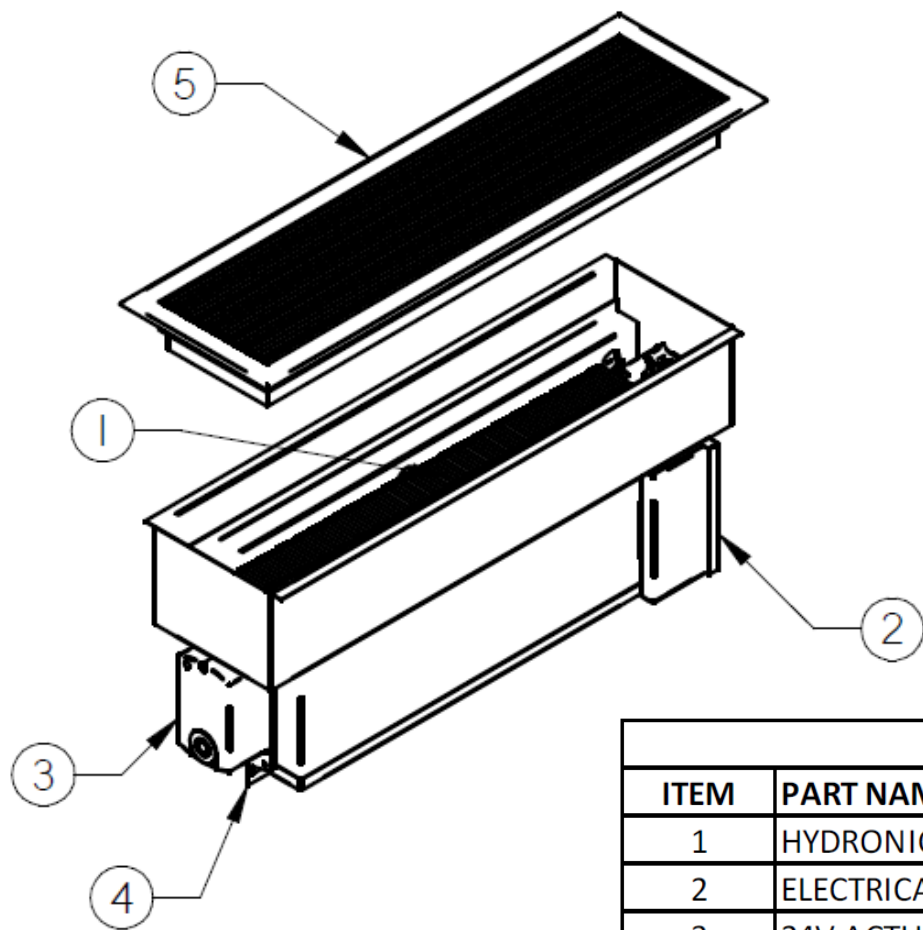
HHT – HC (Electric Coil) Panel Supported



PARTS LIST	
ITEM	PART NAME
1	ELECTRIC COIL
2	ELECTRICAL ENCLOSURE
3	24V ACTUATOR
4	MOTORIZED VAV DAMPER
5	LBG 1000 STYLE

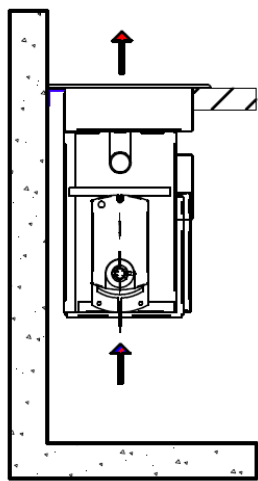
PRODUCT APPLICATION

HHT-HW (Hydronic) Panel Supported

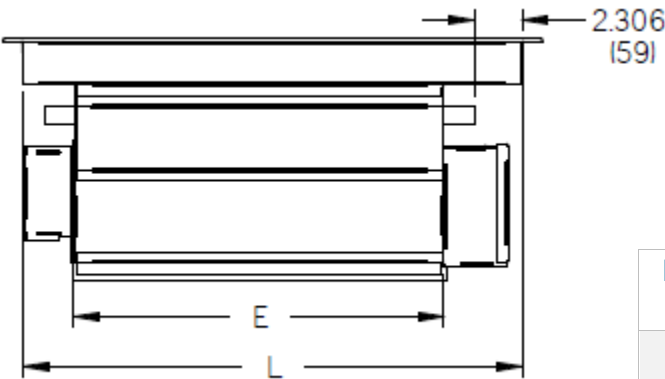


PARTS LIST	
ITEM	PART NAME
1	HYDRONIC COIL, 7/8" OD CONNECTION
2	ELECTRICAL ENCLOSURE
3	24V ACTUATOR
4	MOTORIZED VAV DAMPER
5	LBG 1000 STYLE

Airflow Pattern

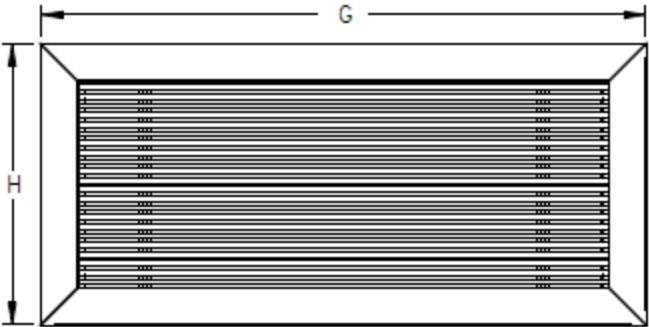


DIMENSIONAL DATA



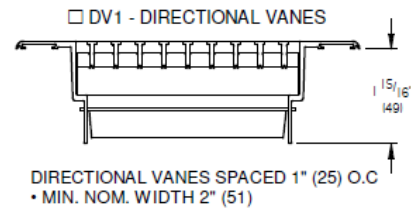
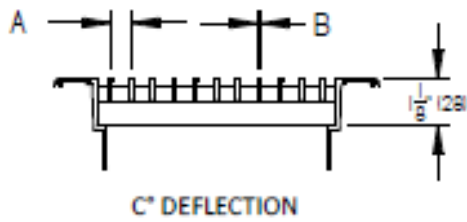
Rough Opening (L x W)	LBG Size (L x W)	Overall Size (L)	Inlet Size (E)
24" x 6 1/4" (610 x 159mm)	23 3/4" x 6" (603 x 152mm)	23 7/8" (606mm)	17 1/2" (445mm)
48" x 6 1/4" (1219 x 159mm)	47 3/4" x 6" (1213 x 152mm)	47 7/8" (1216mm)	41 1/2" (1054mm)

LBG (sold with the HHT)



Rough Opening (L x W)	LBG Size (L x W)	Face Frame	
		G	H
24" x 6 1/4" (610 x 159mm)	23 3/4" x 6" (603 x 152mm)	25 3/8" (645mm)	7 5/8" (194mm)
48" x 6 1/4" (1219 x 159mm)	47 3/4" x 6" (1213 x 152mm)	49 3/8" (1254mm)	7 5/8" (194mm)

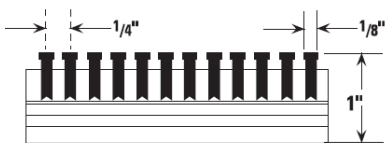
Core Styles



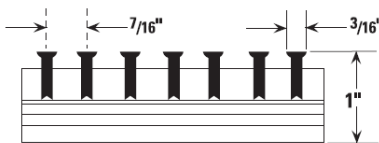
Note: 15A Core style shown w/ 1000 Style Border

Core Style	Spacing Between Vanes (A)	Vane Thickness (B)	Deflection (C)
15A	1/4" (6mm)	3/32" (2mm)	0
16A	1/4" (6mm)	1/8" (3mm)	15
25C	7/16" (11mm)	3/16" (5mm)	0
26C			15
27C			30

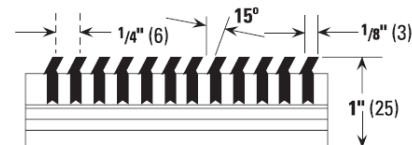
Narrow Bar Spacing
Core 15A 0° Deflection



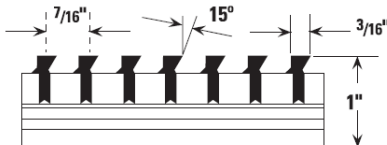
Pencil Proof Bar Spacing
Core 25C 0° Deflection



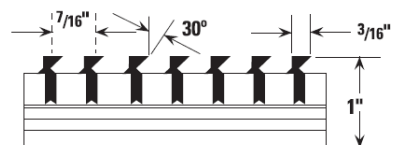
Core 16A 15° Deflection



Core 26C 15° Deflection



Core 27C 30° Deflection



PERFORMANCE DATA

Airflow Performance

Rough Opening (L x W)	HHT Size (L x W)	Airflow (CFM)
24" x 6 1/4" (610 x 159mm)	23 3/4" x 6" (603 x 152mm)	100-200
48" x 6 1/4" (1219 x 159mm)	47 3/4" x 6" (1213 x 152mm)	300-500

Electric Heat Data

120-1 V				
Size	KW	AMPS	MCA	MOP
24" long x 6" width	1.8	15	20.44	25
48" long x 6" width	3.45	N/A	N/A	N/A

240-1 V				
Size	KW	AMPS	MCA	MOP
24" long x 6" width	1.8	7.5	10.22	15
48" long x 6" width	3.45	14.38	19.6	20

277-1 V				
Size	KW	AMPS	MCA	MOP
24" long x 6" width	1.8	6.5	8.86	15
48" long x 6" width	3.45	12.5	17.03	20

Detailed Airflow Rate for 24" x 6" HHT at .05", .08" and .10" water gauge

	Static Pressure, in.w.g.	0.05	0.08	0.10
	Air Flow Rate, cfm	111	152	171
Unit Type	Water Flow Rate, gpm	Heating Capacity, MBH		
HHT	0.25	4.33	4.91	5.36
24"x6"	1.00	5.12	5.94	6.35
180 °F EWT	2.00	5.68	6.69	7.08
68 °F EAT	4.00	5.97	7.09	8.35
HHT	0.25	2.74	3.00	3.15
24"x6"	1.00	3.33	3.77	4.00
140 °F EWT	2.00	3.73	4.29	4.60
68 °F EAT	4.00	3.92	4.57	4.93
HHT	0.25	1.66	1.76	1.82
24"x6"	1.00	1.87	2.19	2.33
110 °F EWT	2.00	2.16	2.47	2.62
68 °F EAT	4.00	2.31	2.65	2.83
HHT	0.25	4.64	4.90	5.59
24"x6"	1.00	5.35	6.15	6.49
180 °F EWT	2.00	5.97	6.75	7.36
65 °F EAT	4.00	6.32	7.36	7.74
HHT	0.25	2.94	3.24	3.28
24"x6"	1.00	3.48	3.94	4.46
140 °F EWT	2.00	3.92	4.48	4.8
65 °F EAT	4.00	4.14	4.85	5.13
HHT	0.25	1.66	1.86	1.99
24"x6"	1.00	2.06	2.3	2.46
110 °F EWT	2.00	2.29	2.69	2.83
65 °F EAT	4.00	2.46	2.97	3.05

PERFORMANCE DATA

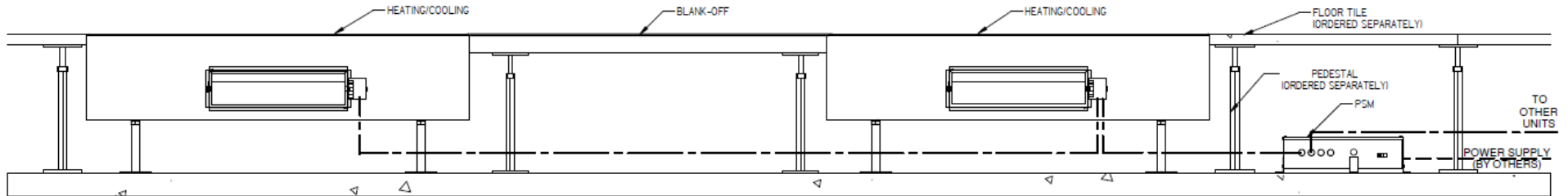
Detailed Airflow Rate for 48" x 6" HHT at .05", .08" and .10" water gauge

Static Pressure, in.w.g. Air Flow Rate, cfm		0.05 320	0.08 412	0.10 468
Unit Type	Water Flow Rate, gpm	Heating Capacity, MBH		
HHT	0.25	5.85	6.69	6.19
48"x6"	1.00	7.62	8.50	8.59
180 °F EWT	2.00	9.16	10.06	10.43
68 °F EAT	4.00	10.06	11.15	11.57
HHT	0.25	3.45	3.88	3.96
48"x6"	1.00	4.79	5.31	5.41
140 °F EWT	2.00	5.83	6.37	6.54
68 °F EAT	4.00	6.48	7.11	7.36
HHT	0.25	2.04	1.88	2.09
48"x6"	1.00	2.76	2.96	3.03
110 °F EWT	2.00	3.32	3.63	3.73
68 °F EAT	4.00	3.74	4.08	4.29
HHT	0.25	5.80	6.60	6.38
48"x6"	1.00	8.00	8.67	8.85
180 °F EWT	2.00	9.38	10.27	10.64
65 °F EAT	4.00	10.23	11.39	11.80
HHT	0.25	4.00	3.88	3.77
48"x6"	1.00	5.14	5.49	5.68
140 °F EWT	2.00	6.06	6.60	6.83
65 °F EAT	4.00	6.75	7.37	7.69
HHT	0.25	2.07	2.15	2.48
48"x6"	1.00	2.98	3.13	3.27
110 °F EWT	2.00	3.56	3.87	4.01
65 °F EAT	4.00	4.00	4.40	4.57

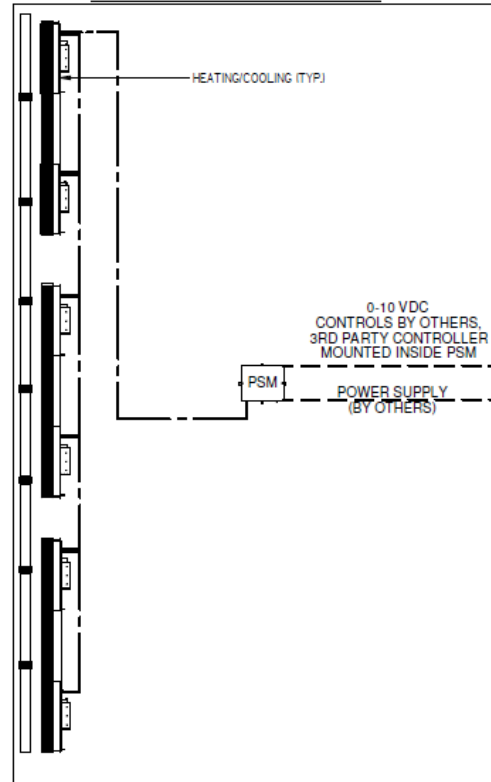
Performance Notes:

1. All data tested with damper fully open where applicable.
2. Units are tested in accordance with ASHRAE Standard 70-2006.
3. Static Pressure measured in inches w.g.
4. Do not operate HHT in such a way as to cause leaving air temperature to be above 120 °F.
5. Calculate air temperature rise (ATR) as follows: $ATR (°F) = 927 \times MBH/cfm$.
6. Calculate water temperature drop (WTD) as follows: $WTD (°F) = 2.04 \times MBH/gpm$.

PERIMETER ZONE



PERIMETER ZONE PLAN VIEW



NOTES:

1. VARIABLE AIR VOLUME UNITS DAISY CHAINED WITH M-CABLES
2. ALL CABLES USED IN PLENUM MUST MEET PLENUM RATING REQUIREMENTS
3. STANDARD CABLE LENGTH OF 25 FT (15 AND 35FT CABLES AVAILABLE AS NEEDED)

POWER SUPPLY MODULE (PSM):

- PLUG AND PLAY BOARD FOR USE WITH ZONE CONTROLLERS BY OTHERS
- ZONE CONTROLLERS FIELD INSTALLED BY BAS CONTRACTOR
- CONTROL DAMPER POSITION PROPORTIONALLY BASED ON 0-10 VDC INPUT SIGNAL
- SEPARATE SIGNALS FOR COOLING ONLY AND HEAT/COOL UNITS
- MAX 6 UNITS PER LINE
- 6-PIN MTA CONNECTOR, ACCEPTS COMMON OR UNIQUE 0-10 VDC INPUT SIGNAL PER CONNECTOR

OPTIONS:

- ☐ 50VA TRANSFORMER, 2 MTA CONNECTORS (MAX 10 DEVICES)
- ☐ 50VA TRANSFORMER, 1 MTA CONNECTOR (MAX 10 DEVICES)

WIRING:

- PLACE PSM UNDER TILE NEAR CENTER OF ZONE. COORDINATE LOCATION
- AVOID PLACING UNDER FURNITURE
- WIRE EACH PORT TO THE CLOSEST AVAILABLE UNIT, THEN PROCEED WITH DAISY CHAINING ADDITIONAL UNITS

PERIMETER UNIT:

- ☐ PBT
- ☐ PNT
- ☐ PFT
- ☐ HHT

POWER SUPPLY:

- ☐ 115V
- ☐ 240V
- ☐ 277V

WIRE LEGEND

- BY ELECTRICAL CONTRACTOR
- MODULAR PLUG & PLAY CABLES (BY GIFS)

