

GLOBAL IFS®

Underfloor Air Distribution System

Linear Bar Terminal (LBT)



SYSTEM OVERVIEW

The Linear Bar Terminal (LBT-HC and LBT-VC) is designed for a raised floor system requiring perimeter conditioning cooling, or both heating and cooling. The LBT is suitable for light foot traffic when used in conjunction with the Linear Bar Grille (LBG) - heavy duty construction. The LBT-VC plenum comes equipped with a VAV damper for modulating cooling airflow from an underfloor plenum. The LBT-HC option combines the VAV damper for cooling via an underfloor plenum with a ducted inlet for heating via an underfloor fan box (FDB).

Features

- Steel plenum painted black
- Overall height allows for cable runs under unit in 12 in. floors
- Modulating damper for VAV cooling control
- Plenum rated cable provided for simple connection to the Global IFS underfloor system

Modular Design

Removable end caps are supplied with each unit allowing either discrete or continuous grille appearances.

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

Flexibility in Design

Floor supported plenum, to be used with 1000 series grille border.

Pedestal supported plenum, to be used with 125/187 series grille border for a flange-less appearance.

Plenum is available in two different sizes.

Inlet is available in two sizes: 6 in. round and 8 in. oval.

PRODUCT APPLICATION

Global IFS Underfloor Air System

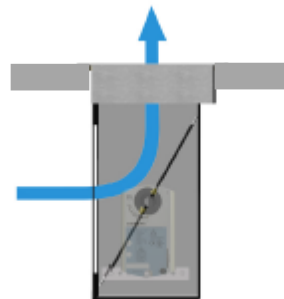
The Global IFS Underfloor Air System Solution is easy to apply. This system combines the benefits of Raised Access Floor (RAF) and Global IFS' years of occupant comfort experience to provide a tailored solution that achieves a comfortable building environment and maximum flexibility. LBT-HC and LBT-VC products are most commonly used in perimeter zones.

Perimeter Zones

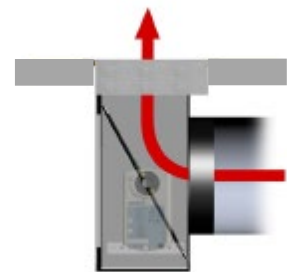
These zones are typically more complex than interior zones. Perimeter zones generally have larger and more varying loads and often require auxiliary heat. Using the proper system helps control heating and cooling requirements for the space.

Ducted Fan Heating and Plenum Cooling

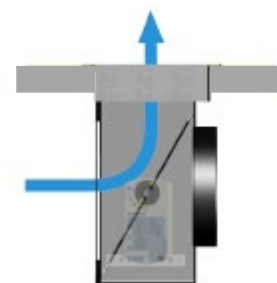
In areas where plenum cooling can be implemented the LBT has a damper which modulates between cooling and heating positions. In this application, a fan terminal is only required in heating mode. Cooling is provided through the plenum while the fan is off, and heating is provided through the ducted fan box with a hot water coil or an electric heater. A thermostat monitors the room temperature, while the PCM on-board the fan terminal modulates the fan space and heating device to meet the space requirements.



Airflow

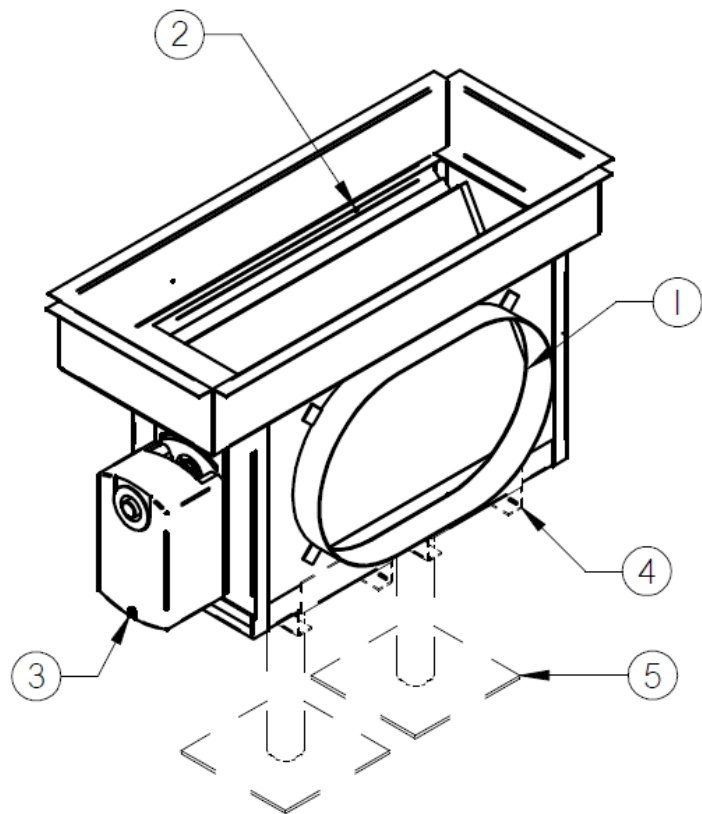


Heating mode
Airflow

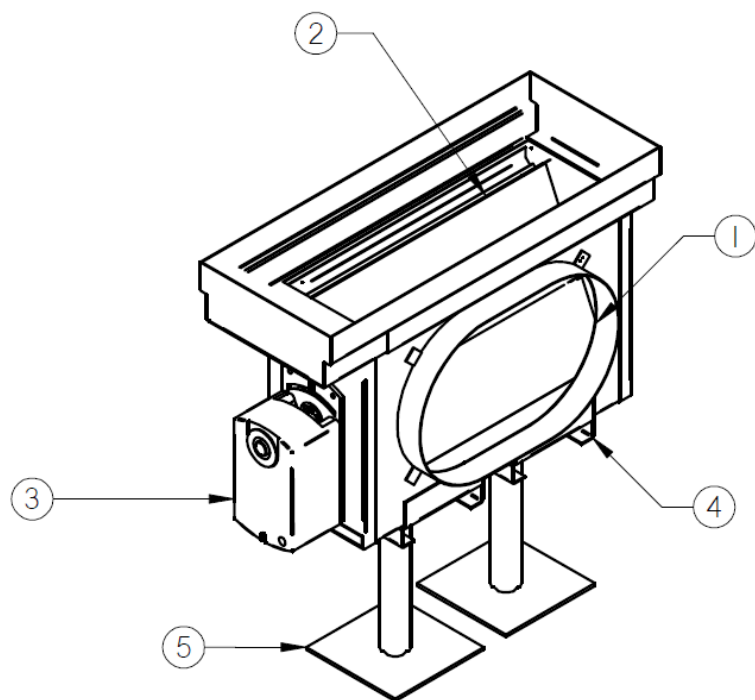


Cooling mode
Airflow

Floor Tile Support-Flanged Trough



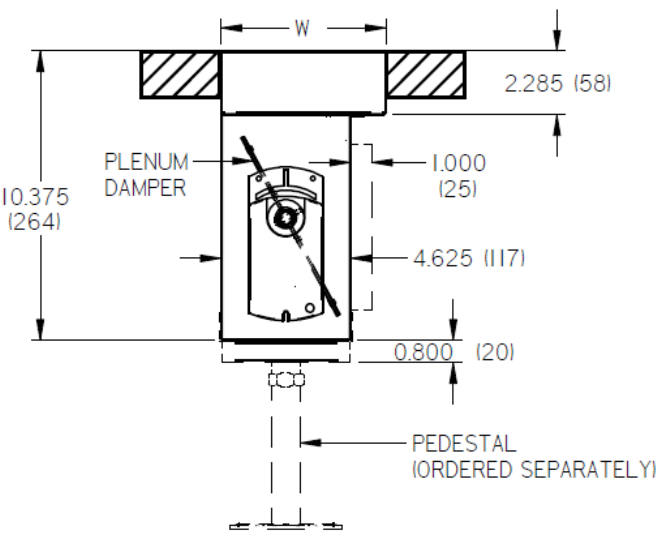
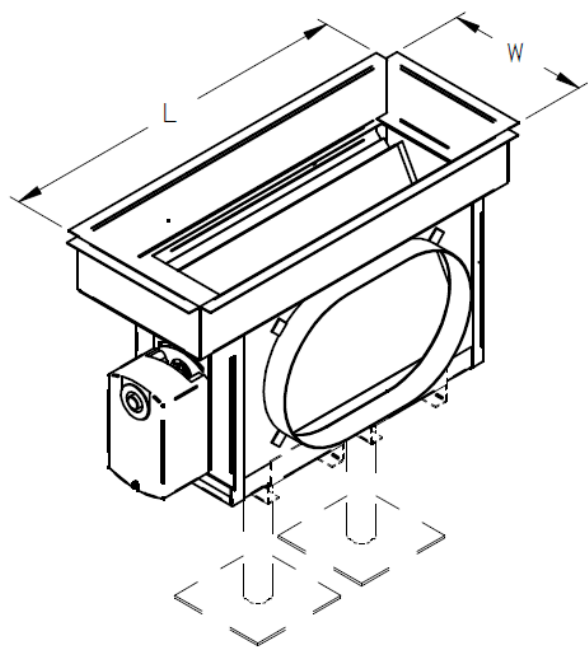
Pedestal Support-Unflanged Trough



PARTS LIST	
ITEM	PART NAME
1	INLET FOR DUCTED HEAT
2	VAV FOR PLENUM COOLING
3	24 VAC ACTUATOR (OPT)
4	PEDESTAL SUPPORT BRACKET (OPT for FTS)
5	PEDESTAL (OPT, ORDERED SEPARATELY)

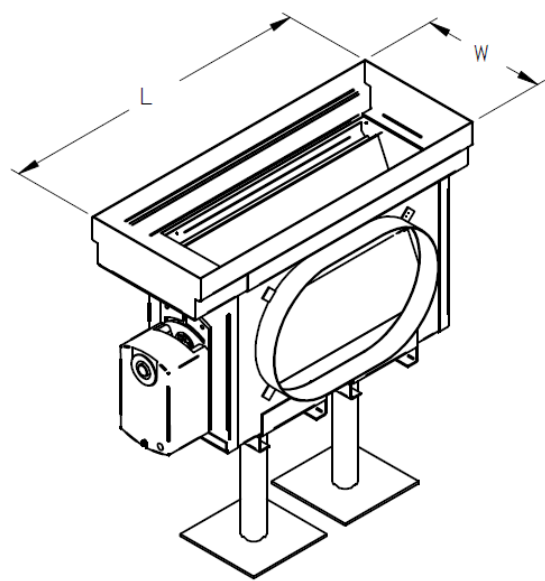
DIMENSIONAL DATA

Floor Tile Support-Flanged Trough



NOTE: FTS SUPPORT STYLE SHOWN

Pedestal Support-Unflanged Trough

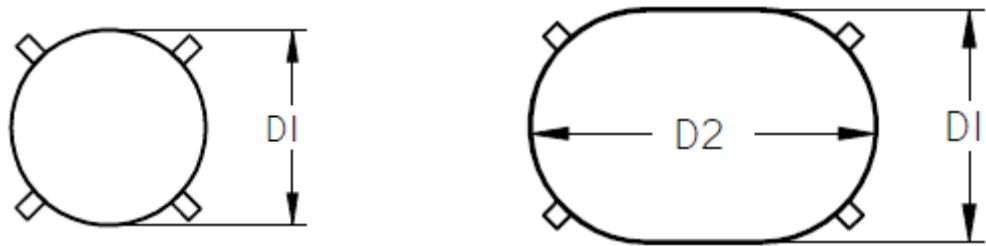


Floor Tile & Pedestal Supported

Rough Opening (L x W)	Plenum Length	Plenum Width	Minimum Plenum Height
15" x 6" (381x152.4mm)	14.875 (377.83mm)	5.875" (149.23mm)	10.375" (2641mm)
16" x 8" (406.4x203.2mm)	15.875 (403.23mm)	7.875" (200.03mm)	

DIMENSIONAL DATA

Inlet Size

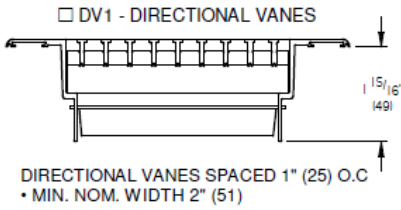
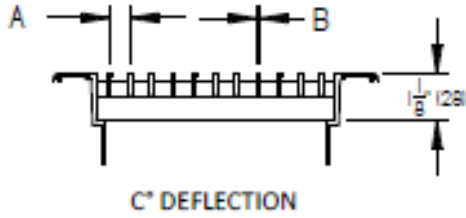


Size	D1	D2
6 in. Round	5.875" (149mm)	5.875 (149mm)
8 in. Oval	6.0" (152mm)	8.937 (227mm)

***Linear Bar Grille (LBG) sold separately*

DIMENSIONAL DATA

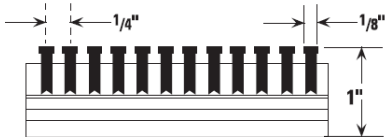
Core Styles



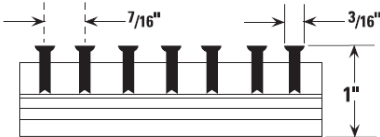
Note: 15A Core style shown w/ 1000 Style Border

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

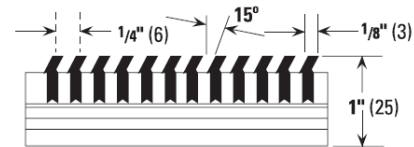
Narrow Bar Spacing
Core 15A 0° Deflection



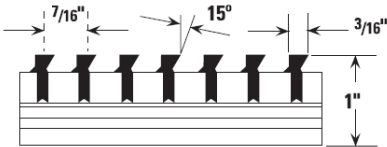
Pencil Proof Bar Spacing
Core 25C 0° Deflection



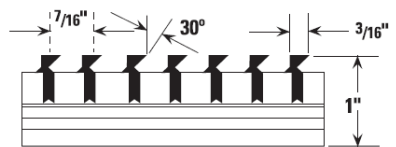
Core 16A 15° Deflection



Core 26C 15° Deflection



Core 27C 30° Deflection



PERFORMANCE DATA

Plenum Cooling

Plenum size	Pressure in.w.g.	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10
15 x 6	Airflow CFM	51	77	91	106	120	131	141	152	161	170
	Sound NC	-	-	-	-	-	21	25	27	28	29
16 x 8	Airflow CFM	76	115	137	158	180	195	210	225	240	254
	Sound NC	-	-	-	-	-	17	18	19	22	24

Ducted Heating

Plenum Size	Duct Size	cfm	50	100	150	200	250
15 x 6	6 in. round	Pressure in.w.g.	0.01	0.03	0.06	0.11	N/A
		Sound NC	-	-	29	37	
	8 in. oval	Pressure in.w.g.	0.01	0.04	0.08	0.15	
		Sound NC	-	-	22	31	
16 x 8	6 in. round	Pressure in.w.g.	N/A	0.02	0.04	0.06	0.10
		Sound NC		-	21	29	37
	8 in. oval	Pressure in.w.g.		0.01	0.03	0.06	0.09
		Sound NC		-	-	20	26

Performance Notes:

1. All data tested with damper fully open where applicable.
2. Units are tested in accordance with ASHRAE Standard 70-2006 (RA2011).
3. Airflow is in cubic feet per minute, cfm.
4. SP - Static pressure is in inches of water, in. w.g.
5. NC levels are based on a room absorption of 10 dB, re 10⁻¹² watts and one diffuser.
6. Blanks "-" signifies individual diffusers have been lab tested and verified to achieve noise levels below NC-15 in accordance with ASHRAE-70.
7. Ducted indicates the LPT is direct ducted to a supply source.
8. Plenum indicates the LPT is sourced from a pressurized plenum.
9. LPT-HC cooling performance equal to LPT-VC.
10. Heating performance for LPT-HC only.
11. For throw values refer to Linear Floor Grille (LFG) with 25C core style.