

ENVIRO-TEC® HL SERIES FAN COIL UNITS



QUIET COMFORT

**APPLICATION
FLEXIBILITY**

EASILY SERVICED

**ARCHITECTURALLY
PREFERRED**



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ENVIRONMENTAL TECHNOLOGIES, INC.
ENGINEERING FOR EXCELLENCE

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SS-FCUHL • 2/2002 • Part No. PX-00-0058

CONTRACTORS

ENVIRO-TEC® HL Series horizontal fan coil units provide maximum performance while reducing installed cost to the contractor. Ultra low profile design (maximum 10" on concealed models; 12" on exposed) allows installation virtually anywhere. Bottom access to all components through available hinged access doors makes service easy.

DESIGNERS

The HL's modular construction and number of available sizes renders unparalleled flexibility. On concealed models, the coils and drain pan can be reversed in the field to allow piping connections on either side. Available with chilled water or DX cooling, and hot water, steam or electric heating coils, HL Series fan coils produce the ultimate in comfort and flexibility.



Model HLF

OWNERS

ARI 440 certification ensures exacting performance. Concerned about Indoor Air Quality? Sloped drain pans are standard features on HL Series fan coils. They are easily removed for cleaning and to provide access to the coils for cleaning.

HL SERIES STANDARD AND OPTIONAL FEATURES

STANDARD FEATURES

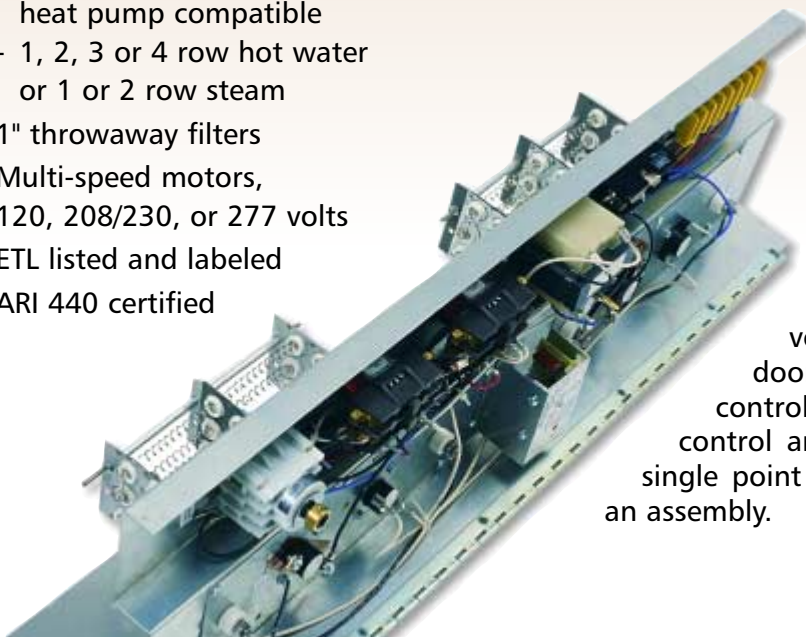
- Low profile, 10" or 12" height for all sizes
- Heavy gauge G 60, chromate coated galvanized steel casing construction
- 1/2" 4lb. dual-density fiberglass insulation mechanically fastened to casing
- Stamped louver supply and return air grilles (Model HLE exposed)
- Durable powder coat paint finish (Model HLE)
- Sloped drain pan, internally insulated
 - Field reversible for left or right connections
- Removable fan assembly
- 2 or 4 pipe configuration, heating coil in reheat position
 - Field reversible for left or right connections
 - Manual air vent fittings
 - 2, 3 or 4 row chilled water or 3 or 4 row DX, heat pump compatible
 - 1, 2, 3 or 4 row hot water or 1 or 2 row steam
- 1" throwaway filters
- Multi-speed motors, 120, 208/230, or 277 volts
- ETL listed and labeled
- ARI 440 certified

OPTIONAL FEATURES

- Insulated plenum, rear ducted or bottom return (Models HLP and HLF concealed)
 - Field reversible
- Foil faced insulation
- Stainless steel drain pan
- Secondary drain connection
- Auxiliary drip pan – stainless steel or galvanized
- Bottom hinged electrical enclosure
- Heating coil in preheat position
- Auto air vents
- Double deflection discharge grille (Model HLE exposed)

ELECTRIC HEAT

Available in a wide variety of kW and voltage configurations. Options include door interlock disconnects, low voltage controls and quiet operating contactors. All control and electric heat configurations with single point power connection are ETL listed as an assembly.



INNOVATIVE DESIGN SIMPLIFIES



ELECTRICAL ENCLOSURE

The bottom hinged electrical enclosure provides access to a spacious electrical compartment. This compartment houses all electric heat and control components. Terminal strips are furnished for simple power and control wiring connections. Multiple knockouts allow wiring entries from either side of the compartment.



FILTERS

One inch throwaway filters are tight fitting to prevent air bypass. Filters are easily removable from the bottom through the access panel.

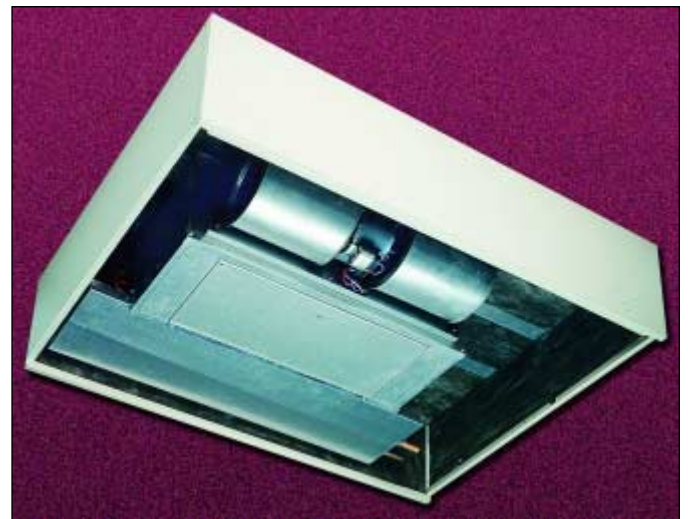


DRAIN PAN

The optional sloped, double wall, insulated drain pan can be equipped with a secondary drain connection. A stainless steel liner is also available. Standard drain pans are internally insulated, single wall galvanized steel. On concealed models, the HL Series drain pan is easily removable for cleaning or reversing connections.

COILS

All fan coils are available in 2 or 4 pipe configurations. The heating coil may be optionally placed in the reheat position. On concealed models, heating and cooling coils are field reversible for right, left or opposite side connections. Separate tube sheets for heating and cooling coils allow for cleaning on the entering and leaving air sides when the drain pan is removed.



ACCESS PANELS

Full access to the unit for installation and service is available with both of the bottom panels removed. All electrical and piping services are accessed from the bottom.

INSTALLATION AND SERVICE



TELESCOPING BOTTOM PANEL

The telescoping bottom panel allows for fully recessing the unit while permitting service access into the ceiling plenum. The architectural ceiling panel is finished with a durable powder coat paint.



FAN DECK

The fan assembly is easily removed without disconnecting the ductwork for service access to motors and blowers at, or away from the unit.

POWDER COATED PAINTED SURFACE

Textured decorator, powder coat finish resists scuffing, scratching, fading, and fingerprints.

Online Rating and Selection Program

ENVIRO-TEC® is proud to offer the industry's first web-based rating and selection program for fan coil and air handling units. The program allows ETI representatives, engineers, and contractors to rate and select products using an Internet enabled computer. The selections may be saved into project schedules which facilitates collaboration of information between design engineers, representatives, and installing contractors. Contact your representative, or visit our website at www.enviro-tec.com to learn more.

ENVIRO-TEC®
ENGINEERING THE WORLD

Project Name: Test FCB Project
 Line #: 3 Tag: FCB-01
 Date: 18/11/2001 11:54:38 AM ET Selection Version: 8.8.1
 Selection Method: Fixed ESP/Maximal Capacity Elevation: 8.8
 Note:

Model	Unit Size	Airflow (cfm)	ESP (in. wg)	Motor HP	Motor RPM	Fan Amps	Fan Hertz	Fan Qty	CFM/HP	Motor Speed	Height (in)
FCM-TEC	30	550	0.85	1/2	1750	1.1	185	2	125/508	High	16

* Height does not include accessories.

Fan selection and performance is shown at standard airflow conditions.

Chilled Water Coil									
EAT DBWB (deg.F)	LAT DBWB (deg.F)	Total Capacity (tHk)	Sensible Capacity (tHk)	ENTER HT (deg.F)	Fluid Flow (gpm)	Fluid PD (ft)	Air PD (in. wg)	Coil Area (sq.Ft)	Coil FPI
75.7/62.5	61.1/57.5	8950	5890	45.7/55	1.87	0.03	0.08	2	18

Hot Water Coil								
EAT DB (deg.F)	LAT DB (deg.F)	Sensible Capacity (tHk)	ENTER HT (deg.F)	Fluid Flow (gpm)	Fluid PD (ft)	Air PD (in. wg)	Coil Area (sq.Ft)	Coil FPI
78	114.4	26727	100.7/140	2.74	0.08	0.04	1	18

Sound Power by Octave Band (dB Leq) @ 10' Hub							
Band	2	3	4	5	6	7	8
Frequency	125	250	500	1000	2000	4000	8000
Total	80	80	87	98	90	84	81

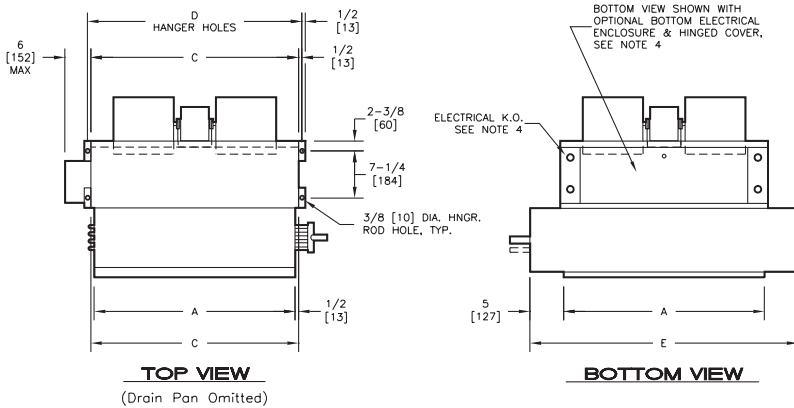
- Unit data is certified in accordance with AHJ 440.
- Coils are manufactured in accordance with AHJ 416.
- Sound data tested in accordance with AHJ 354-26.
 - Total sound power level data based on Model HEP with fan CFM at corresponding motor hp with 115/200 volt motor, 4 wire coil, 1" bypass filter, 6" external static pressure and standard rated internal process losses.
- Unit pressure drop and CFM based upon dry coil as required by AHJ 440.
- Scheduled motor interference is for 91 Speed.
- The coil selection has been made at Standard conditions.
- Outside Airflow is a user input value for scheduling purposes.

A completed fan coil selection from the web-based ENVIRO-TEC® Selection Program



HLF AND HLP DIMENSIONAL INFORMATION

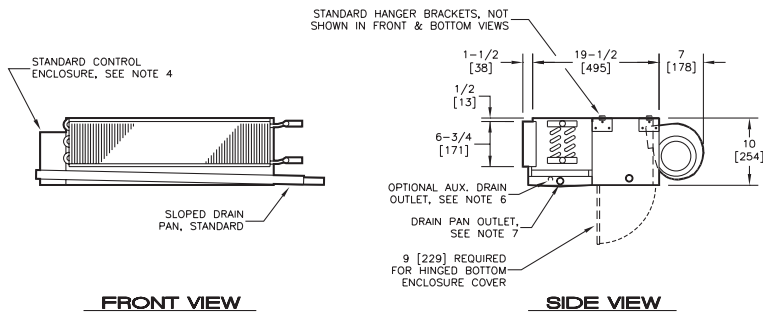
Model HLF



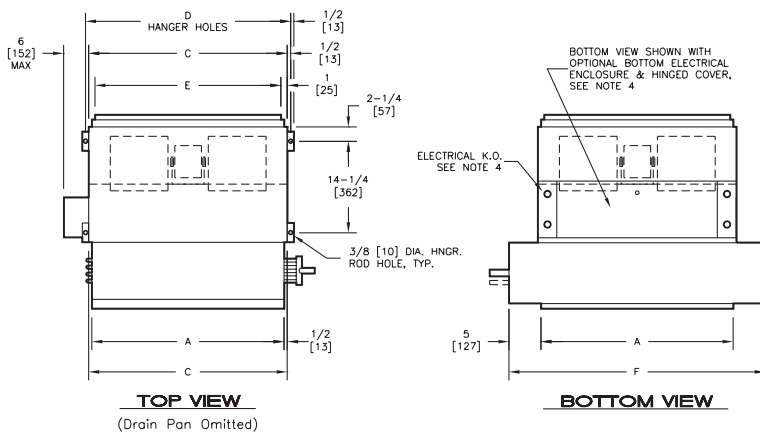
Dimensional Data

UNIT SIZE	A	C	D	E
20	20 [508]	21 [533]	22 [559]	30 [762]
30	30 [762]	31 [787]	32 [813]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	70 [1778]

All dimensions in inches [millimeters].



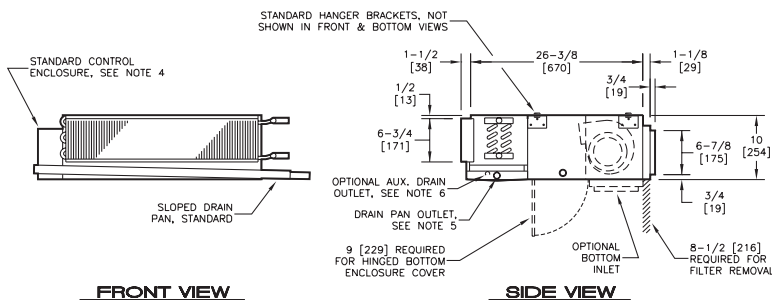
Model HLP



Dimensional Data

UNIT SIZE	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

All dimensions in inches [millimeters].



STANDARD RATINGS AND HEATING CAPACITY

ARI Standard Ratings

UNIT TYPE	UNIT SIZE, COIL ROWS	NOMINAL CFM	GPM	COOLING CAPACITY		PWR. INPUT	WATER
				TOTAL BTUH	SENSIBLE BTUH	WATTS	PRESS. DROP
						PSC	FEET OF WATER
HLP (Plenum Return) HLF (Free Return)	20, 3 Row (3C)	250	1.8	8,000	5,900	81	7.6
	30, 3 Row (3C)	500	3.0	14,000	12,000	152	5.1
	40, 3 Row (3C)	750	4.3	20,400	15,400	263	9.0
HLE	30, 3 Row (3C)	1000	5.1	27,000	21,000	380	5.0
	60, 3 Row (3C)	1250	7.3	33,500	26,000	489	14.4
	20, 3 Row (3C)	250	1.5	7,400	5,600	62	1.5
HLE	30, 3 Row (3C)	460	2.6	12,900	10,000	121	6.2
	40, 3 Row (3C)	660	3.8	18,700	14,300	215	3.8
	50, 3 Row (3C)	840	4.5	22,500	18,000	352	7.0
HLP	60, 3 Row (3C)	1150	6.5	31,600	24,800	402	13.5
	20, 4 Row (4C)	250	2.1	8,800	6,000	77	2.5
	30, 4 Row (4C)	500	3.5	16,000	12,500	151	9.3
HLF	40, 4 Row (4C)	750	4.9	23,100	17,000	261	5.2
	50, 4 Row (4C)	1000	6.2	32,000	24,000	365	10.3
	60, 4 Row (4C)	1250	8.3	41,400	30,600	466	19.0
HLE	20, 4 Row (4C)	240	1.5	7,500	5,650	60	3.0
	30, 4 Row (4C)	450	3.2	15,500	11,700	120	10.2
	40, 4 Row (4C)	640	4.4	21,800	16,000	205	7.0
HLE	50, 4 Row (4C)	800	5.5	27,000	21,200	348	12.5
	60, 4 Row (4C)	1070	7.5	37,000	28,000	383	23.2

NOTE:

1. Based on 80°F DB and 67°F WB EAT, 45°F EWT, 10°F temperature rise, high fan speed. Motor voltage 115/1/60. Airflow under dry coil conditions. Both models tested at 0.0" external static pressure.

Heating Capacity

UNIT TYPE	UNIT SIZE	NOMINAL CFM	1 ROW			2 ROW			3 ROW			4 ROW		
			SMBH	GPM	WPD	SMBH	GPM	WPD	SMBH	GPM	WPD	SMBH	GPM	WPD
HLP	20	250	8.6	0.4	0.2	15.7	0.8	0.9	19.7	1.0	0.3	22.9	1.2	0.5
	30	500	16.1	0.8	0.6	29.2	1.5	3.2	38.3	2.0	1.2	43.4	2.2	0.7
	40	750	23.6	1.2	1.5	40.5	2.1	1.6	55.2	2.8	1.1	64.9	3.3	1.8
HLF	50	1000	28.7	1.5	0.7	53.7	2.7	2.9	73.7	3.8	2.0	86.5	4.4	3.4
	60	1400	36.1	1.9	1.1	66.9	3.4	4.7	92.4	4.7	3.4	108.3	5.5	5.6
	20	250	7.9	0.4	0.3	14.0	0.8	1.5	19.2	1.0	0.5	17.4	0.9	0.8
HLE	30	450	13.5	0.7	0.9	24.0	1.3	4.8	30.7	1.6	1.7	34.4	1.8	1.0
	40	650	20.4	1.1	2.0	34.0	1.8	1.7	46.0	2.4	1.2	49.6	2.6	1.9
	50	850	22.5	1.2	0.7	40.7	2.1	3.1	53.0	2.8	2.1	59.4	3.0	3.3
60	1200	30.9	1.6	1.2	55.4	2.9	5.5	72.6	3.8	3.9	80.0	4.1	6.0	

NOTE:

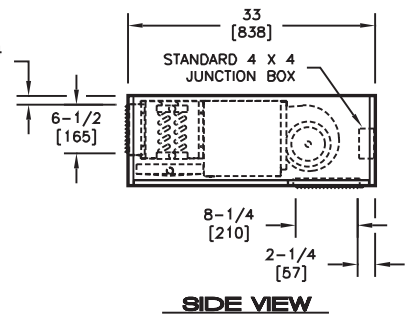
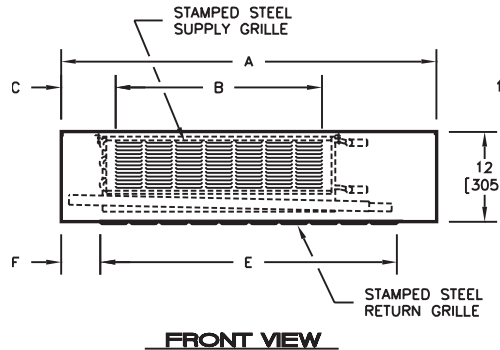
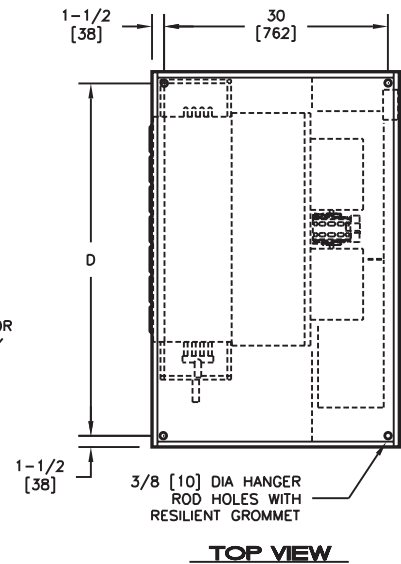
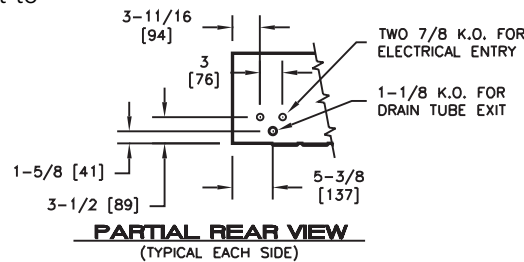
1. Based on 70°F DB EAT, 180°F EWT, 40°F temperature drop, high fan speed.

Model HLE Stamped Bottom Return

Dimensional Data

SIZE	A	B	C	D	E	F
20	40 [1016]	19 1/2 [495]	6 1/4 [159]	37 [940]	27 1/2 [699]	6 1/4 [159]
30	50 [1270]	27 1/2 [699]	7 1/4 [184]	47 [1194]	39 1/2 [1003]	5 1/4 [133]
40	60 [1524]	39 1/2 [1003]	6 1/4 [159]	57 [1448]	47 1/2 [1207]	6 1/4 [159]
50	70 [1778]	47 1/2 [1207]	7 1/4 [184]	67 [1702]	59 1/2 [1511]	5 1/4 [133]
60	80 [2032]	59 1/2 [1511]	6 1/4 [159]	77 [1956]	67 1/2 [1715]	6 1/4 [159]

NOTE: All data and dimensions subject to change without notice.



NOTE: Refer to www.enviro-tec.com for current submittal drawings and other unit arrangements.