

HL Fan-Coil Units

Low-Profile, Horizontal



HL Fan-Coil Units: Innovative design simplifies installation and service

Owners

AHRI Standard 440-certification ensures exacting performance. The HL fan-coil unit's 3-speed, direct-drive motor allows optimized cabinet airflow and sound performance. Enhanced sound levels are achieved through an electronic fan-speed controller (SCR) which allows further motor-speed tuning.

HL concealed model fan-coil units are constructed of galvanized steel, surpassing the ASTM 125-hour, salt-spray test for corrosion and rust. Exposed-cabinet model HLE features durable, powder-coated, galvanealed steel that resists fading, scratches and fingerprints.

Concerned about Indoor Air Quality? Sloped drain pans are standard on all HL units, and are easily removed to provide access to the coils for cleaning. Optional stainless-steel drain pans and coil casings are available. IAQ lining options include foil-faced or elastomeric, closed-cell-foam insulation.

Designers

The HL unit's impressive list of standard features provides unparalleled design flexibility. Configuration options include rear-ducted or bottom-ducted return. Ceiling access is achieved through architectural-louvered or solid return-air panels, or a telescoping-duct panel for adjustable unit recessing.

Available with chilled-water or DX cooling coils, and hot-water, steam or electric heating coils, HL fan coils produce the ultimate in comfort and flexibility.

Contractors

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

For fast-track jobs, the HL Quick Ship unit is available in 5, 10 or 15 days with an impressive list of unit options and controls.

Factory-Mounted Control Packages

A wide variety of control options and thermostats are offered. Factory-mounting and wiring of DDC controls by others is also available.

HL Fan-Coil Unit Airflow (CFM)	
Model and Unit Size	Nominal
HLP/HLF 20	250
HLE 20	250
HLP/HLF 25	400
HLE 25	350
HLP/HLF 30	500
HLE 30	450
HLP/HLF 40	750
HLE 40	650
HLP/HLF 50	1000
HLE 50	850
HLP/HLF 60	1400
HLE 60	1200

Actual performance may vary based on model, options and operating conditions. Refer to Web-Select® at enviro-tec.com for complete performance information.



Silent Relays

Silent, solid-state relays are available for fan and electric-heat control in sound-sensitive environments.

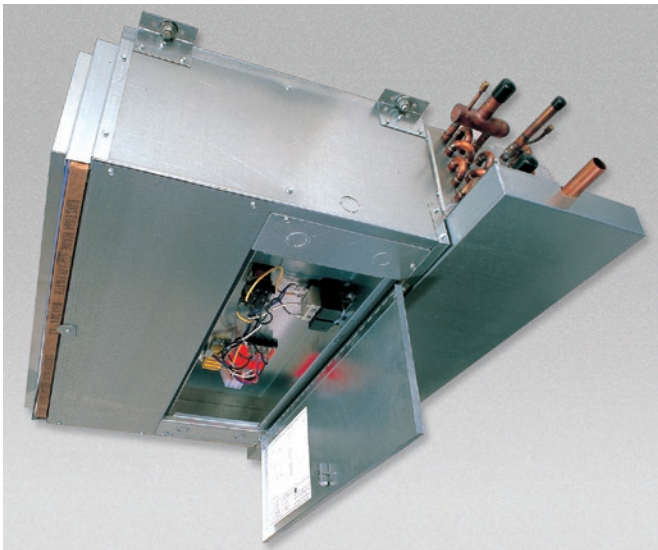
Factory-Furnished Valve Packages

Valve packages provided by the factory ensure proper fit, operation and performance.

Electric Heat

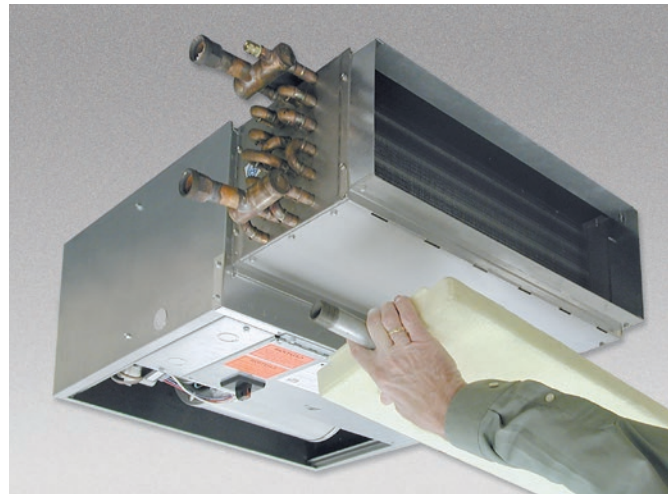
A variety of kW and voltage configurations are available. Options include door-interlock disconnects, low-voltage controls, and silent, solid-state relays. All control and electric-heat configurations include single-point-power connection and are cETL listed as an assembly.





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-wiring and control-wiring connections. Multiple knockouts allow wiring entries from either side of the compartment.

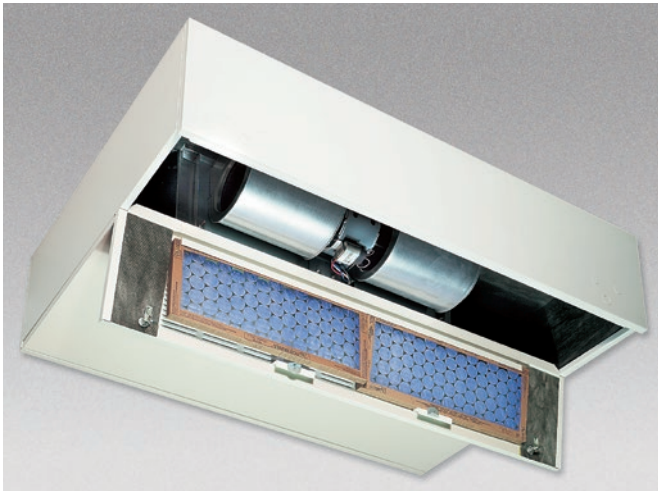


Drain Pan

Standard drain pans are externally insulated, single-wall, galvanized steel with an option for stainless steel. Drain pans are available with secondary drain connection. On concealed models, the HL Series drain pan is easily removable for cleaning or reversing connections.

Coils

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

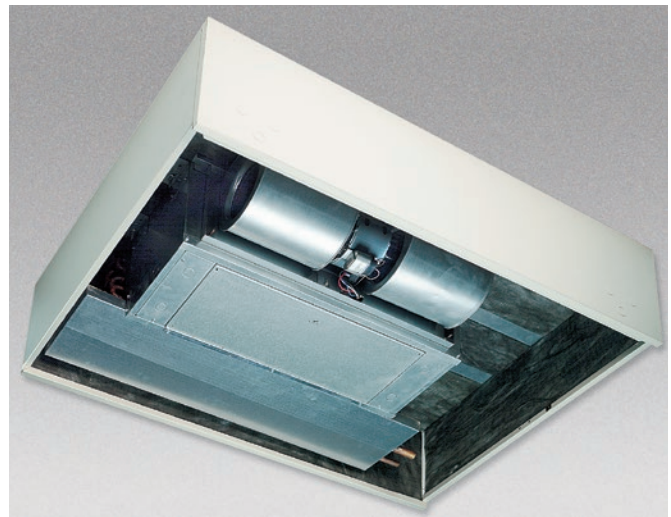


Filters

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

Powder-Coated Painted Surface

Exposed-cabinet model HLE, as well as ceiling-access panels and supply and return-air grilles, feature a powder-coat finish that resists scuffing, scratching, fading, and fingerprints.



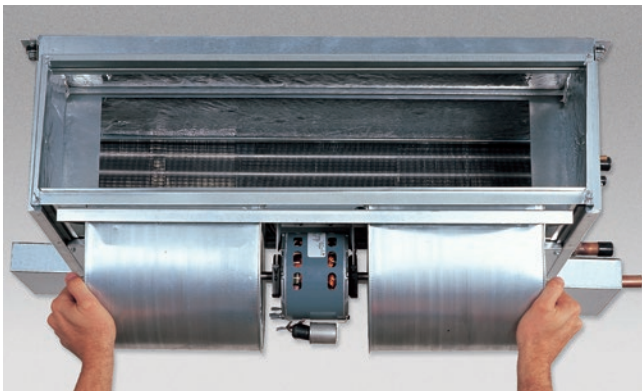
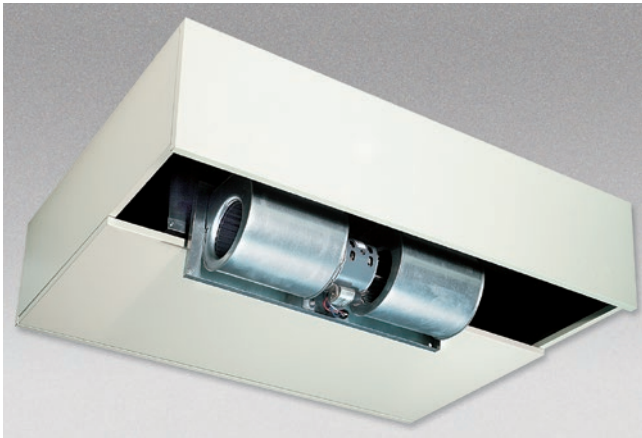
Access Panels

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.



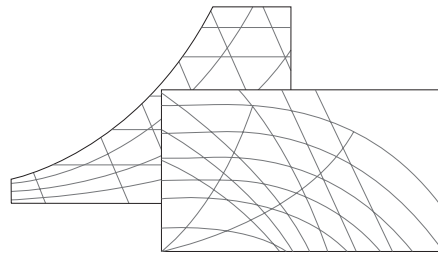
Telescoping Bottom Panel

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.



Online Rating and Selection Program

The Web-Select[®] tool is the industry's first web-based HVAC rating and selection program. Requiring no installation software or license fees, the Web-Select tool is accessible around the clock to representatives, owners, engineers and contractors. The beauty of this system lies in the sharing of information between users by saving selections into project schedules. Selections can be made and later edited, priced and ordered by your representative. Contact your representative for access to the Web-Select tool.

Project Name: Test 04-07-15
Line #: 25
Selection Method: Fixed ESP/Nominal Airflow
Selection Date: 4/24/2015 9:02:52 AM
Coil Version: 7.01c

Ship Cycle: Standard Shipment
Tag:
Elevation: 0 ft
Printed Date: 4/24/2015 9:03:06 AM ET
Notes: This field is for user purposes only and will not transfer to the order form.

General																	
Mfg	Model	Unit Size	Unit Capacity	Airflow (cfm)	OA (cfm)	ESP (in.wc)	Motor (Hp)	Motor RPM	Fan Full Load Amps	MCA	MSCP	Fan Qty	Fan Watts	V/Phz	Motor Speed	Weight (lb)	Filter Type
Enviro-Tec	HLP	30	Standard	599	0	0.05	(1) 1/10	1080	1.5	2	15	165	2	115/1/60	High	94	1" Throwaway

* Weight does not include accessories.

Fan selection and performance is shown at elevation of 0 ft.

Chilled Water Coil										
EAT DBW (deg F)	LAT DBW (deg F)	Total Capacity (Btu/h)	Sensible Capacity (Btu/h)	EWTLWT (deg F)	Fluid Flow (gpm)	Fluid PD (ft.)	Fluid Velocity (fps)	Air PD (in.wc)	Coil Rows	No. Circuits
75/60	58.1/53.4	11130	11000	45/55	2.20	8.29	3.3	0.17	3	10

Hot Water Coil										
EAT DB (deg F)	LAT DB (deg F)	Sensible Capacity (Btu/h)	EWTLWT (deg F)	Fluid Flow (gpm)	Fluid PD (ft.)	Fluid Velocity (fps)	Air PD (in.wc)	Coil Rows	Coil FPI	No. Circuits
55	97	27270	180/160	2.80	3.37	4.2	0.07	1	10	2

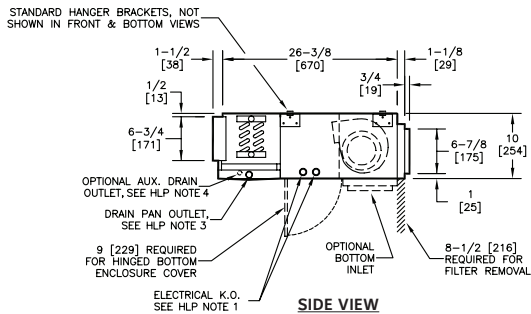
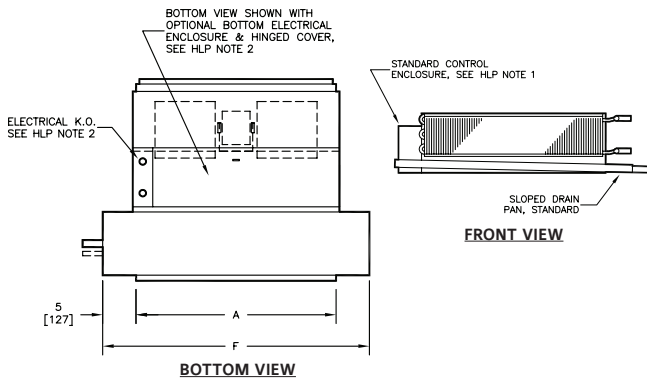
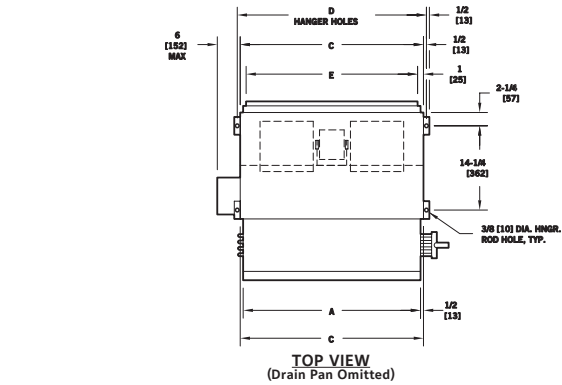
Sound Power By Octave Band (dB Re 10 ⁻¹² Watts)						
Band	2	3	4	5	6	7
Frequency	125	250	500	1000	2000	4000
Total	62	64	60	56	52	47

- Unit data is certified in accordance with AHRI-440.
- Sound data tested in accordance with AHRI-350-2000.
- Total sound power level data based on Horizontal Concealed Plenum Return Model with fan CFM at corresponding motor tap with 115/160 volt PSC motor, 4 row coil, 1" throwaway filter, 0" external static pressure and standard rated internal pressure losses.
- Unit pressure drop and CFM based upon dry coil as required by AHRI-440.
- Scheduled motor information is for H Speed.
- The coil selection has been made at Standard conditions.
- Outside Airflow is a user input value for scheduling purposes.

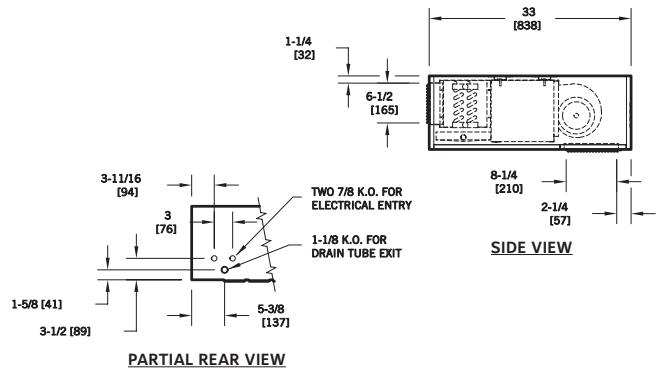
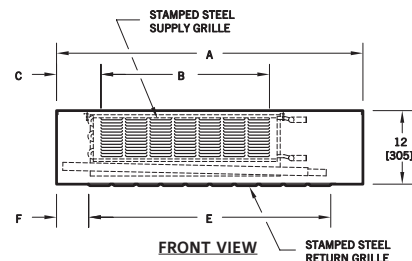
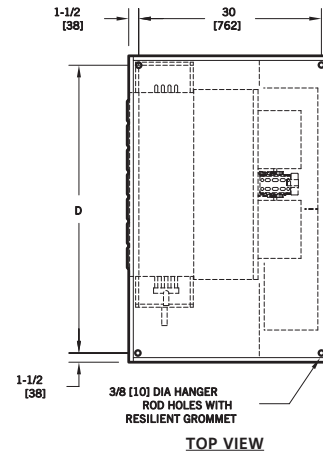
A completed selection from the Web-Select program

Selections may be shared with other Web-Select users, printed, exported to a spreadsheet or AutoCAD, or saved as a PDF file for emailing.

Model HLP Plenum Return Dimensional Data



Model HLE Exposed Cabinet Dimensional Data



Unit Size	Dimension				
	A	C	D	E	F
20	20" [508]	21" [533]	22" [559]	19" [483]	30" [762]
25	26" [660]	27" [686]	28" [711]	25" [635]	36" [914]
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]

Unit Size	Dimension				
	A	C	D	E	F
20	40" [1016]	19-1/2" [495]	6-1/4" [159]	27-1/2" [699]	6-1/4" [159]
25	46" [1168]	23-1/2" [597]	6-1/4" [159]	35-1/2" [902]	5-1/4" [133]
30	50" [1270]	27-1/2" [699]	7-1/4" [184]	39-1/2" [1003]	5-1/4" [133]
40	60" [1524]	39-1/2" [1003]	6-1/4" [159]	47-1/2" [1207]	6-1/4" [159]
50	70" [1778]	47-1/2" [1207]	7-1/4" [184]	59-1/2" [1511]	5-1/4" [133]
60	80" [2032]	59-1/2" [1511]	6-1/4" [159]	67-1/2" [1715]	6-1/4" [159]

GENERAL NOTES:

1. All dimensions in inches [mm] and are $\pm 1/4"$ [6mm]. Metric values are soft conversion.

2. Left-hand unit shown; right-hand unit opposite.

HLP NOTES:

- Standard control enclosure is mounted on unit side opposite cooling-coil connections. Unit casing includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
- Optional bottom control enclosure with hinged cover replaces standard side-mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.

3. Standard, externally foam-coated, galvanized-steel drain pan has 7/8" ODM copper outlet. Stainless-steel drain pan has 3/4" MPT galvanized-steel outlet.

4. Auxiliary drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.

5. See coil connection drawings for coil connection sizes and locations.

HLE NOTES:

1. Electrical enclosure size and location may vary with optional features. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.

2. Drain piping should be routed through casing opening indicated to provide proper drain slope.

3. Louvered bottom panel is hinged and removable for access to filter and fan assembly.

4. Fixed bottom panel is removable for access to optional electrical enclosure, coil, and drain pan.

5. Internal insulation of field-piping may be required.

6. Field-piping casing penetrations must be cut in the field to match individual job requirements.

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

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

HL Fan-Coil Unit Features

STANDARD FEATURES:

Construction

All Units

- AHRI Standard 440-certified and labeled
- Galvanized-steel construction
- 1/2" thick fiberglass insulation
- 1 1/2" duct discharge collar
- Four-point hanger mounting brackets

Plenum Units

- Integral filter rack with 1" throwaway filter
- Integral rear-ducted return – field-reversible to bottom return

Exposed Units

- Stamped louver supply-air and return-air grille
- Durable powder-coat paint
- 18 gauge bottom-panel construction

Coils

- Cooling: 3 or 4-row chilled water or DX, heat-pump compatible
- Heating: 1 or 2-row hot water or steam – reheat or preheat position
- 6 total rows of cooling and heating coils maximum
- 1/2" O.D. seamless copper tubes
- 0.016" tube-wall thickness
- High-efficiency, aluminum-fin surface for optimizing heat transfer, pressure drop and carryover
- Left-hand or right-hand, same or opposite-side connections
- Access to entering and leaving air sides for cleaning
- Removable for service
- Manual air vents

Drain Pans

- Single-wall, galvanized-steel, externally insulated – fire-retardant and antimicrobial
- Positively sloped to drain connection
- Removable, field-reversible
- 7/8" O.D. primary-drain connection

Fan Assemblies

- Forward-curved, DWDI, centrifugal-type blowers
- 115-volt, single-phase, three-tap PSC motors
- Quick-disconnect motor connections
- Removable fan/motor deck for service

Electrical

- cETL listed for safety compliance
- Electrical junction box for field-wiring terminations
- Terminal block for field connections

Electric Heat

- ETL-listed as an assembly for safety compliance
- Integral electric-heat assembly with removable elements for easy service
- Automatic-reset primary and back-up secondary thermal limits
- Single-point-power connection
- Bottom-hinged electrical enclosure

OPTIONAL FEATURES:

Construction

All Units

- Foil-faced fiberglass insulation
- Elastomeric, closed-cell-foam insulation

Plenum Units

- Bottom return
- 1" pleated filters (MERV 6)
- Spare 1" throwaway filters
- Telescoping-bottom panels

Exposed Units

- 1" pleated filters (MERV 6)
- Double-deflection discharge grille
- Ducted supply and/or return

Coils

- Automatic air vents
- Stainless-steel coil casings
- 0.025" tube wall (standard on steam)

Drain Pans

- Stainless-steel construction with external insulation
- 5/8" O.D. secondary-drain connection
- Auxiliary drip pans, galvanized or stainless-steel

Fan Assemblies

- 208-230, 220 & 277-volt, single-phase, three-tap PSC motors

Electrical

- Bottom-hinged-cover electrical enclosure
- SCR fan-speed controller
- Fan-relay packages
- Silent, solid-state fan relays
- Toggle-disconnect switch
- Condensate-overflow switch (drain pan)
- Main fusing
- Unit and remote-mounted, three-speed fan switches

Electric Heat

- Manual-reset, secondary thermal limits
- Door-interlocking disconnect switches
- Main fusing
- Field-installable with ETL-listed kit
- Silent relay/contactors

Piping Packages

- Factory-assembled – shipped loose for field installation
- 1/2" and 3/4", 2-way and 3-way, normally closed, two-position, electric, motorized valves
- Isolation ball valves with memory stop
- Fixed-flow and adjustable-flow control devices
- Unions and P/T ports
- Floating-point, modulating control valves
- High-pressure, close-off actuators (1/2" = 50 PSIG; 3/4" = 25 PSIG)

Thermostats

- Remote-mounted analog, digital-display, or programmable
- 2-pipe and 4-pipe control sequences
- Automatic and manual changeover
- Integral, three-speed, fan switches