UNILUX
HVAC INDUSTRIES

Horizontal Fan Coils:

Installation, Operation, and Maintenance Manual



REV-00
Published September 2026

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7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Part 1:
Horizontal Fan Coil Catalog

Product Portfolio

Horizontal Fan Coil Overview

The Horizontal fan coil unit is built for installation in the ceiling space, making it well-suited for ducted applications that require strong output. It offers an airflow range of 200 to 2000 CFM and features a horizontal design constructed from heavy-gauge steel with a durable galvanized finish. Designed to accommodate both ducted supply and return air, the unit also provides key advantages such as simplified installation with optional factory-assembled valve packages that reduce on-site piping, and easy service with accessible components and tool-free filter replacement. Each unit is thoroughly tested and inspected to ensure dependable, trouble-free operation.

Versatile Design Options

The units offer multiple coil configurations to handle varying heating and cooling needs. A standard EC motor provides efficient performance, and grille styles suit exposed installations. Flexible airflow arrangements ideal for new or renovation projects.

Simplified Installation

(Optional) Factory-assembled valve packages, unit mounted disconnect switches, single point power connections, and optional unit-mounted controls reduce on-site piping and electrical work. Units are factory tagged for easy identification, and opposite-end connections can streamline renovations.

Reliable Performance & Serviceability

Every unit is factory tested and inspected for trouble-free start-up and comes with an ETL safety compliance label. Components are easily accessible for quick maintenance.



Standard Features - All Models

1. **Cabinet**
   20-gauge galvanized steel contains for all exterior components and 18-gauge for interior components and is designed to be ceiling mounted.

2. **Coil Assembly**
   Coils corrugated aluminum fins mechanically bonded to ½" OD copper tube. Rows and circuiting to be selected to suit scheduled capacities. Coils are rated for a minimum working pressure of 450 psig.

3. **Fan Assembly**
   A thermally protected, multi-speed ECM motor is resiliently mounted to a dual inlet blower fan.

4. **Control Valve Package (Optional)**
   Factory assembled 2-way control valve package with shut-off and autoflow valves for 2-pipe or 4-pipe units with flare nut connection to piping branches facilitate easy removal without using torch or pipe cutters. 6-Way Valve piping packages are available. An optional drip tray is available for valve packages.

5. **Insulated Drain Pan**
   Stainless steel primary drain pan insulated on the underside.

6. **Electrical Requirements**
   1. 115V, 1PH, 60HZ
   2. 208V, 1PH, 60HZ
   3. 277V, 1PH, 60HZ

7. **Thermostat Control**
   Simple ON/OFF or modulating control available.

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Product Line Up

1. High Capacity. 600 CFM – 2,000 CFM

Unilux's High Capacity Horizontal Fan Coils are engineered to maximize CFM output, delivering consistent and efficient heating and cooling for mid to high-rise buildings. Designed for whisper-quiet operation, these units are available in both 2-pipe and 4-pipe configurations to suit a variety of system requirements. They offer easy ceiling installation, come in multiple sizes and capacities, and include 24V AC controls for precise operation. ECM motors boost efficiency and long-term reliability, while advanced safety sensors help prevent water damage and ensure safe, trouble-free performance. With their combination of high performance, flexibility, and durability, these fan coils are ideal for modern residential applications.

2. Low Profile. 200 CFM – 1,200 CFM

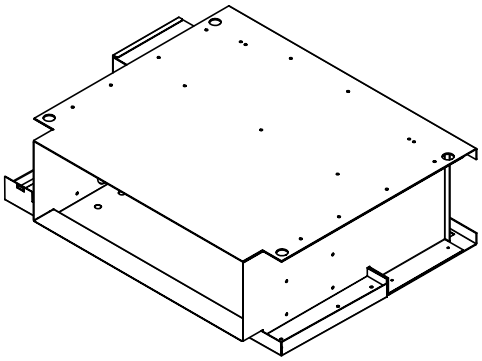
Unilux's Low Profile Horizontal Fan Coils combine a compact, space-saving design with reliable comfort, delivering efficient heating and cooling for mid to high-rise residential buildings, typically installed within individual suites. These units run quietly and are available in both 2-pipe and 4-pipe configurations, making them adaptable to a range of system requirements. They feature easy ceiling installation, multiple sizes and capacities, and precise 24V AC controls. ECM motors enhance efficiency and long-term durability, while advanced safety sensors help prevent water damage, ensuring safe and dependable operation in any residential setting.

Cabinet Options

The horizontal fan coil cabinet is a factory assembled cabinet divided into two sections: an air coil and fan section. Horizontal fan coil cabinets come in two models and multiple sizes for each: a low-profile unit and a high capacity unit.

Low Profile

Low Profile Horizontal Fan Coils are available in models LL/ LLE/ LSC - 200–1200.

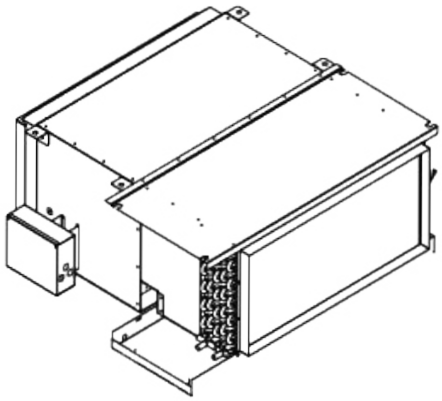


Isometric View



High Capacity

High Capacity Horizontal Fan Coils are available in models HL/ HLE/ HSC - 600–2000.



Isometric View



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Nomenclature Key

Model Size

DDD	YYYY	CC	V	H	M	V	A	F	F	X

Unit Name	
LL	Low Profile 2 Pipe (No Aux Electric Heat)
LLE	Low Profile 2 Pipe (w/ Aux Electic Heat)
LSC	Low Profile 4 Pipe
HL	High Capacity 2 Pipe (No Aux Electric Heat)
HLE	High Capacity 2 Pipe (w/ Aux Electric Heat)
HSC	High Capacity 4 Pipe

Model Sizes	
LL/ LLE/ LSC	200-1200
HL/ HLE/ HSC	600-1200

# Of Rows Cooling/ Heating	
LL/ LLE/ HL/ HLE (2 Pipe)	
30	3 (3C=3H)
40	4 (4C=4H)
LSC/ HSC Series (4 Pipe)	
31	4 (3C+1H)
32	5 (3C+2H)
41	5 (4C+1H)
42	6 (4C+2H)

Voltage	
1	115V, 1PH, 60HZ
2	208V, 1PH, 60HZ
3	277V, 1PH, 60HZ

Heater Sizes	
0	None
1	1 KW
2	1.5 KW (HLE Only)

Motor Type	
1	Constant Torque
2	Constant Volume
3	Constant Torque

Valve Type	
0	None
2	2 Way Valve
3	3 Way Valve
6	6 Way Valve
P	PIQV Way Valve

Filter Type
1-1" Filter
2-2" Filter

Flood Sensor + Check Valve	
0	None
1	Flood Sensor Only
2	Flood Sensor + Check Valve
3	Strainer Only
4	Flood Sensor + Strainer

Flow Control	
0	None
1	2 Pipe-2 Way
2	2 Pipe-3 Way w Bypass
3	4 Pipe-2 Way/ 6 Way
4	4 Pipe-3 Way/ 6 Way w Bypass

Actuator Type	
0	None
1	On/Off, Fail to Open
2	On/Off, Fail to Close
3	On/Off, Fail Last Position
4	Modulating, Fail to Open
5	Modulating, Fail to Close
6	Modulating, Fail Last Position
7	On/Off, 6 Way Belimo
8	On/Off, 6 Way JCI

Table-1

For Example:

1. LSC-300-32-10123202
2. HLE-1000-50-22237311
3. HSC-2000-44-11326332

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Features, Options, Accessories

Controls



Thermostat (Optional)

Our standard fan coil control boards are compatible with most thermostats. Unilux offers 7 day programmable thermostats on all fan coils, or easily install your favorite thermostat.

Freeze Protection Sensor

All Unilux units are now equipped with a special temperature sensor that causes the unit to enter freeze protection mode when air entering the system drops below 40°F. Freeze protection mode circulates hot water through the coil and shuts down the fan to reduce cold air flow.

Drain Pan Overflow Sensor

All fan coils are equipped with a float switch to detect rising water levels in the drain pan and turn off the unit if in danger of flooding.

LED Panel

Heat	**Amber Solid:** Heating mode active (AUX heater off). **Amber Blinking:** AUX heater active and/or water temperature does not satisfy.
Cool	**Blue Solid:** Cooling mode active. **Blue Blinking:** Water temperature does not satisfy.
FZ	**Red Solid:** Freeze protect active (entering air temperature <35°F), and buzzer will sound.
DP	**Red Solid:** Drain pan alarm active, and buzzer will sound.
PWR	**Red Solid:** Power ON.

NOTE: An active alarm for FZ or DP will also cause Heat or Cool LED to blink when there is an active demand call.

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Filters

Standard disposable filter set and one MERV 8 air filter set are provided with every fan coil.

MERV 8 – Basic Residential / Light Commercial Filtration

Highlights:
- Captures common household dust, lint, and carpet fibers
- Removes pollen and larger mold spores from the air
- Helps reduce visible dust buildup on surfaces
- Low airflow resistance (easy on HVAC systems)
- Cost-effective option for standard filtration needs
- Best for homes or spaces without significant air quality concerns

MERV 11 – Enhanced Residential / Light Commercial Filtration (Optional)

Highlights:
- Captures finer dust particles and pet dander more effectively than MERV 8
- Improves removal of mold spores and pollen with higher efficiency
- Can capture some airborne particles from smoke and smog
- Moderate airflow resistance, slight increase vs. MERV 8 (may require system compatibility check)
- Helps keep HVAC coils and components cleaner for longer
- Good balance of air quality improvement and system performance

MERV 13 – High-Efficiency Filtration in Commercial / Sensitive Environments (Optional)

Highlights:
- Captures very fine particles including bacteria-sized contaminants
- More effective at filtering smoke, smog, and airborne respiratory particles
- Significantly reduces dust, allergens, and microscopic debris
- Higher airflow resistance (may require system compatibility check)
- Helps maximize indoor air quality in high-occupancy or sensitive spaces
- Ideal for buildings prioritizing health, cleanliness, and air quality control

Filter Replacement Type and Schedule

Return air filters trap dust, dirt, and pet dander from entering your fan coil. Changing filters improves indoor air quality and helps maintain your unit.

Open your access panel, slide up and into bracket or from side. Replace it with a new Unilux filter. To browse and order air filters for your Unilux HFC, check out www.uniluxdirect.com

LL/ LLE/ LSC/ HL/ HLE/ HSC - Air Filter Sizes		
Model	**Nominal Filter Size**	**Quantity Per Unit**
LL/ LLE/ LSC 200-300	16.5" x 9" x 1"	1
	8" x 9" x 1"	1
LL/ LLE/ LSC 400-600	16.5" x 9" x 1"	2
	8" x 9" x 1"	1
LL/ LLE/ LLC 800-1000-1200	16.5" x 9" x 1"	4
HL/ HLE 600-800	16" x 20" x 1"	1
HL/ HLE 1000-1200	16" x 30" x 1"	1
HL/ HLE 1400-1600	16" x 20" x 1"	2
HL/ HLE 1800-2000	16" x 30" x 1	1
	16" x 20" x 1	1
HSC 600-800	16" x 20" x 1"	1
HSC 1000-1200	16" x 30" x 1"	1
HSC 1400-1600	16" x 20" x 1"	2
HSC 1800-2000	16" x 30" x 1"	1
	16" x 20" x 1"	1

Note: Some units require multiple filters. ***Table-2***

The throwaway or replaceable filter is commonly used on Unilux fan coil units.

Filter must be cleaned or changed a minimum of four times a year. Under certain operating conditions, it may be necessary to change or clean the filters more frequently to obtain maximum unit performance.

The time interval between each replacement should be established based on regular inspection of the filter and should be recorded in the log for each unit. Dirty filters are the cause of the most common system performance complaints. It is essential that filters be serviced on a regular basis.



The units should not be operated at any time without complete enclosure, and filter in place. Operation in any other condition could result in motor overloading or burnout, clogging of coil surface, fan blade damage, or all of the above.

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Ratings and Listings

LL/ LSC Electrical Ratings

Models	Power Supply			Primary Fan Motor				FC System Totals		
	V	PH	Hz	Fan Speed	Type	HP	QTY	FLA	MCA	MOP
LL/ LSC 200	115	1	60	High	Constant Torque	1/4	1	3.5	4.38	15
LL/ LSC 300	115	1	60	High	Constant Torque	1/4	1	3.5	4.38	15
LL/ LSC 400	115	1	60	High	Constant Torque	1/4	1	3.5	4.38	15
LL/ LSC 600	115	1	60	High	Constant Torque	1/4	1	3.5	4.38	15
LL/ LSC 800	115	1	60	High	Constant Torque	1/4	2	7.0	7.88	15
LL/ LSC 1000	115	1	60	High	Constant Torque	1/4	2	7.0	7.88	15
LL/ LSC 1200	115	1	60	High	Constant Torque	1/4	2	7.0	7.88	15
LL/ LSC 200	208	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 300	208	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 400	208	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 600	208	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 800	208	1	60	High	Constant Torque	1/4	2	4.6	5.18	15
LL/ LSC 1000	208	1	60	High	Constant Torque	1/4	2	4.6	5.18	15
LL/ LSC 1200	208	1	60	High	Constant Torque	1/4	2	4.6	5.18	15
LL/ LSC 200	277	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 300	277	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 400	277	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 600	277	1	60	High	Constant Torque	1/4	1	2.3	2.88	15
LL/ LSC 800	277	1	60	High	Constant Torque	1/4	2	4.6	5.18	15
LL/ LSC 1000	277	1	60	High	Constant Torque	1/4	2	4.6	5.18	15
LL/ LSC 1200	277	1	60	High	Constant Torque	1/4	2	4.6	5.18	15

Note: For electric heat option (LLE), please consult the factory for electical ratings.

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HL/ HSC Electrical Ratings

Models	Power Supply			Primary Fan Motor				FC System Totals		
	V	PH	Hz	Fan Speed	Type	HP	QTY	FLA	MCA	MOP
HL 600	115	1	60	High	Constant Torque	1/3	1	4.8	6.00	15
HL 800	115	1	60	High	Constant Torque	1/3	1	4.8	6.00	15
HL 1000	115	1	60	High	Constant Torque	1/2	1	6.8	8.50	15
HL 1200	115	1	60	High	Constant Torque	1/2	1	6.8	8.50	15
HL 1400	115	1	60	High	Constant Torque	1/3	2	9.6	10.80	15
HL 1600	115	1	60	High	Constant Torque	1/3	2	9.6	10.80	15
HL 1800	115	1	60	High	Constant Torque	1/2	2	13.6	15.30	20
HL 2000	115	1	60	High	Constant Torque	1/2	2	13.6	15.30	20
HSC 600	115	1	60	High	Constant Torque	1/3	1	4.8	6.00	15
HSC 800	115	1	60	High	Constant Torque	1/3	1	4.8	6.00	15
HSC 1000	115	1	60	High	Constant Torque	1/2	1	6.8	8.50	15
HSC 1200	115	1	60	High	Constant Torque	1/2	1	6.8	8.50	15
HSC 1400	115	1	60	High	Constant Torque	1/3	2	9.6	10.80	15
HSC 1600	115	1	60	High	Constant Torque	1/3	2	9.6	10.80	15
HSC 1800	115	1	60	High	Constant Torque	1/2	2	13.6	15.30	20
HSC 2000	115	1	60	High	Constant Torque	1/2	2	13.6	15.30	20
HL 600	208	1	60	High	Constant Volume	1/3	1	3.0	3.75	15
HL 800	208	1	60	High	Constant Volume	1/3	1	3.0	3.75	15
HL 1000	208	1	60	High	Constant Volume	1/2	1	5.0	6.25	15
HL 1200	208	1	60	High	Constant Volume	1/2	1	5.0	6.25	15
HL 1400	208	1	60	High	Constant Volume	1/3	2	6.0	6.75	15
HL 1600	208	1	60	High	Constant Volume	1/3	2	6.0	6.75	15
HL 1800	208	1	60	High	Constant Volume	1/2	2	10.0	11.25	15
HL 2000	208	1	60	High	Constant Volume	1/2	2	10.0	11.25	15
HSC 600	208	1	60	High	Constant Volume	1/3	1	3.0	3.75	15
HSC 800	208	1	60	High	Constant Volume	1/3	1	3.0	3.75	15
HSC 1000	208	1	60	High	Constant Volume	1/2	1	5.0	6.25	15
HSC 1200	208	1	60	High	Constant Volume	1/2	1	5.0	6.25	15
HSC 1400	208	1	60	High	Constant Volume	1/3	2	6.0	6.75	15
HSC 1600	208	1	60	High	Constant Volume	1/3	2	6.0	6.75	15
HSC 1800	208	1	60	High	Constant Volume	1/2	2	10.00	11.25	15
HSC 2000	208	1	60	High	Constant Volume	1/2	2	10.00	11.25	15

Note: For electric heat option (HLE), please consult the factory for electical ratings.

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HL/ HSC Electrical Ratings (Cont'd)

Models	Power Supply			Primary Fan Motor				FC System Totals		
	V	PH	Hz	Fan Speed	Type	HP	QTY	FLA	MCA	MOP
HL 600	277	1	60	High	Constant Volume	1/3	1	2.6	3.25	15
HL 800	277	1	60	High	Constant Volume	1/3	1	2.6	3.25	15
HL 1000	277	1	60	High	Constant Volume	1/2	1	4.1	5.13	15
HL 1200	277	1	60	High	Constant Volume	1/2	1	4.1	5.13	15
HL 1400	277	1	60	High	Constant Volume	1/3	2	5.2	5.85	15
HL 1600	277	1	60	High	Constant Volume	1/3	2	5.2	5.85	15
HL 1800	277	1	60	High	Constant Volume	1/2	2	8.2	9.23	15
HL 2000	277	1	60	High	Constant Volume	1/2	2	8.2	9.23	15
HSC 600	277	1	60	High	Constant Volume	1/3	1	2.6	3.25	15
HSC 800	277	1	60	High	Constant Volume	1/3	1	2.6	3.25	15
HSC 1000	277	1	60	High	Constant Volume	1/2	1	4.1	5.13	15
HSC 1200	277	1	60	High	Constant Volume	1/2	1	4.1	5.13	15
HSC 1400	277	1	60	High	Constant Volume	1/3	2	5.2	5.85	15
HSC 1600	277	1	60	High	Constant Volume	1/3	2	5.2	5.85	15
HSC 1800	277	1	60	High	Constant Volume	1/2	2	8.2	9.23	15
HSC 2000	277	1	60	High	Constant Volume	1/2	2	8.2	9.23	15

Note: For electric heat option (HLE), please consult the factory for electical ratings.

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Capacity Schedules

Total Cooling Capacity Schedule - LL/ LLE/ LSC Series

LL/ LLE/ LSC- Total Cooling Capacity						
Model	Coil Rows	Coil Performance				
		HFC Supply Air CFM	Water Flow GPM	Total Cooling Cap, MBH	Sens. Cooling Cap. MBH	WPD FT
LL/ LLE 200	4	200	1.00	6.0	4.9	1.0
LL/ LLE 300	4	300	1.50	9.3	7.4	2.0
LL/ LLE 400	4	400	3.00	16.5	11.6	8.5
LL/ LLE 600	4	600	3.50	21.3	15.9	11.1
LL/ LLE 800	4	800	5.00	29.3	21.6	5.2
LL/ LLE 1000	4	1000	5.50	33.6	25.7	6.2
LL/ LLE 1200	4	1200	6.00	37.5	29.6	7.2
LSC 200	4	200	1.00	6.0	4.9	1.0
LSC 300	4	300	1.50	9.3	7.4	2.0
LSC 400	4	400	3.00	16.5	11.6	8.5
LSC 600	4	600	3.50	21.3	15.9	11.1
LSC 800	4	800	5.00	29.3	21.6	5.2
LSC 1000	4	1000	5.50	33.6	25.7	6.2
LSC 1200	4	1200	6.00	37.5	29.6	7.2

Note: Capacities are based on EAT at 80°F DB and 67°F WB, EWT at 45°F. Contact factory for job specific capacities.

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Capacity Schedules

Total Heating Capacity Schedule - LL/ LLE/ LSC Series

LL/ LLE/ LSC - Total Heating Capacity					
Model	Coil Rows	Coil Performance			
		HFC Supply Air CFM	Water Flow GPM	Total Heating Capacity MBH	WPD FT
LL/ LLE 200	4	200	1.00	12.0	0.8
LL/ LLE 300	4	300	1.50	17.4	1.6
LL/ LLE 400	4	400	3.00	25.2	2.4
LL/ LLE 600	4	600	3.50	35.0	1.6
LL/ LLE 800	4	800	5.00	49.2	4.2
LL/ LLE 1000	4	1000	5.50	59.0	4.9
LL/ LLE 1200	4	1200	6.00	68.2	5.8
LSC 200	2	200	1.00	10.1	2.2
LSC 300	2	300	1.00	12.9	2.2
LSC 400	2	400	1.50	19.2	6.7
LSC 600	2	600	2.00	26.1	11.2
LSC 800	2	800	2.50	34.8	4.4
LSC 1000	2	1000	3.00	41.4	6.1
LSC 1200	2	1200	4.00	49.6	8.3

Note: Capacities are based on EAT at 68°F and EWT at 140°F. Contact factory for job specific capacities.

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Capacity Schedules

Total Cooling Capacity Schedule - LL/ LLE/ LSC Series

LL/ LLE/ LSC - Total Cooling Capacity						
Model	Coil Rows	Coil Performance				
		HFC Supply Air CFM	Water Flow GPM	Total Cooling Cap, MBH	Sens. Cooling Cap. MBH	WPD FT
LL/ LLE 200	3	200	1.00	5.2	4.5	0.8
LL/ LLE 300	3	300	1.50	8.0	6.7	1.6
LL/ LLE 400	3	400	3.00	13.7	10.4	3.5
LL/ LLE 600	3	600	3.50	17.4	14.0	3.0
LL/ LLE 800	3	800	5.00	26.7	20.3	8.0
LL/ LLE 1000	3	1000	5.50	30.5	24.0	9.5
LL/ LLE 1200	3	1200	6.00	34.0	27.4	11.1
LSC 200	3	200	1.00	5.2	4.5	0.8
LSC 300	3	300	1.50	8.0	6.7	1.6
LSC 400	3	400	3.00	13.7	10.4	3.5
LSC 600	3	600	3.50	17.4	14.0	3.0
LSC 800	3	800	5.00	26.7	20.3	8.0
LSC 1000	3	1000	5.50	30.5	24.0	9.5
LSC 1200	3	1200	6.00	34.0	27.4	11.1

Note: Capacities are based on EAT at 80°F DB and 67°F WB, EWT at 45°F. Contact factory for job specific capacities.

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Capacity Schedules

Total Heating Capacity Schedule - LL/ LLE/ LSC Series

LSC/ LL/ LLE - Total Heating Capacity					
Model	Coil Rows	Coil Performance			
		HFC Supply Air CFM	Water Flow GPM	Total Heating Capacity MBH	WPD FT
LL/ LLE 200	3	200	1.00	11.1	0.6
LL/ LLE 300	3	300	1.50	15.9	1.2
LL/ LLE 400	3	400	3.00	23.8	2.9
LL/ LLE 600	3	600	3.50	32.6	2.3
LL/ LLE 800	3	800	5.00	46.2	6.1
LL/ LLE 1000	3	1000	5.50	54.9	7.3
LL/ LLE 1200	3	1200	6.00	63.1	8.5
LSC 200	1	200	1.00	7.2	1.1
LSC 300	1	300	1.00	8.9	1.1
LSC 400	1	400	1.50	13.7	3.4
LSC 600	1	600	2.00	18.2	5.6
LSC 800	1	800	2.50	25.9	8.0
LSC 1000	1	1000	3.00	30.4	9.0
LSC 1200	1	1200	4.00	35.7	13.0

Note: Capacities are based on EAT at 68°F and EWT at 140°F. Contact factory for job specific capacities.

7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Capacity Schedules

Total Cooling Capacity Schedule - HL/ HLE/ HSC Series

HL/ HLE/ HSC - Total Cooling Capacity						
Model	Coil Rows	Coil Performance				
		HFC Supply Air CFM	Water Flow GPM	Total Cooling Cap, MBH	Sens. Cooling Cap. MBH	WPD FT
HL/ HLE 600	3	600	3.50	17.4	13.9	5.3
HL/ HLE 800	3	800	5.00	22.2	18.0	10.2
HL/ HLE 1000	3	1000	5.50	29.7	23.4	10.7
HL/ HLE 1200	3	1200	6.00	33.0	26.7	12.4
HL/ HLE 1400	3	1400	6.50	40.2	32.1	17.0
HL/ HLE 1600	3	1600	7.00	43.6	35.4	19.3
HL/ HLE 1800	3	1800	7.50	50.8	40.7	12.5
HL/ HLE 2000	3	2000	8.00	54.2	44.1	14.3
HSC 600	3	600	3.50	17.4	13.9	5.3
HSC 800	3	800	5.00	22.2	18.0	10.2
HSC 1000	3	1000	5.50	29.7	23.4	10.7
HSC 1200	3	1200	6.00	33.0	26.7	12.4
HSC 1400	3	1400	6.50	40.2	32.1	17.0
HSC 1600	3	1600	7.00	43.6	35.4	19.3
HSC 1800	3	1800	7.50	50.8	40.7	12.5
HSC 2000	3	2000	8.00	54.2	44.1	14.3

Note: Capacities are based on EAT at 80°F DB and 67°F WB, EWT at 45°F. Contact factory for job specific capacities.

7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Capacity Schedules

Total Heating Capacity Schedule - HSC/ HL/ HLE Series

HL/ HLE/ HSC- Total Heating Capacity					
Model	Coil Rows	Coil Performance			
		HFC Supply Air CFM	Water Flow GPM	Total Heating Capacity MBH	WPD FT
HL/ HLE 600	3	600	3.50	32.1	2.8
HL/ HLE 800	3	800	5.00	41.6	5.4
HL/ HLE 1000	3	1000	5.50	53.3	8.2
HL/ HLE 1200	3	1200	6.00	61.1	9.5
HL/ HLE 1400	3	1400	6.50	72.6	13.4
HL/ HLE 1600	3	1600	7.00	80.3	15.4
HL/ HLE 1800	3	1800	7.50	91.6	12.5
HL/ HLE 2000	3	2000	8.00	99.3	13.8
HSC 600	1	600	2.00	17.7	7.0
HSC 800	1	800	2.50	21.5	6.2
HSC 1000	1	1000	3.00	28.7	9.6
HSC 1200	1	1200	3.50	32.6	13.6
HSC 1400	1	1400	4.00	39.8	10.0
HSC 1600	1	1600	4.50	43.7	12.0
HSC 1800	1	1800	5.00	50.9	14.5
HSC 2000	1	2000	5.50	54.9	15.5

Note: Capacities are based on EAT at 68°F and EWT at 140°F. Contact factory for job specific capacities.

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Capacity Schedules

Total Cooling Capacity Schedule - HL/ HLE/ HSC Series

HL/ HLE/ HSC - Total Cooling Capacity						
Model	Coil Rows	Coil Performance				
		HFC Supply Air CFM	Water Flow GPM	Total Cooling Cap, MBH	Sens. Cooling Cap. MBH	WPD FT
HL/ HLE 600	4	600	3.50	19.1	15.0	2.4
HL/ HLE 800	4	800	5.00	24.7	19.5	4.6
HL/ HLE 1000	4	1000	5.50	32.8	25.2	6.4
HL/ HLE 1200	4	1200	6.00	36.6	29.0	7.5
HL/ HLE 1400	4	1400	6.50	44.4	34.6	10.6
HL/ HLE 1600	4	1600	7.00	48.3	38.4	12.0
HL/ HLE 1800	4	1800	7.50	56.0	44.0	16.1
HL/ HLE 2000	4	2000	8.00	60.0	47.7	17.4
HSC 600	4	600	3.50	19.1	15.0	2.4
HSC 800	4	800	5.00	24.7	19.5	4.6
HSC 1000	4	1000	5.50	32.8	25.2	6.4
HSC 1200	4	1200	6.00	36.6	29.0	7.5
HSC 1400	4	1400	6.50	44.4	34.6	10.6
HSC 1600	4	1600	7.00	48.3	38.4	12.0
HSC 1800	4	1800	7.50	56.0	44.0	16.1
HSC 2000	4	2000	8.00	60.0	47.7	17.4

Note: Capacities are based on EAT at 80°F DB and 67°F WB, EWT at 45°F. Contact factory for job specific capacities.

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Capacity Schedules

Total Heating Capacity Schedule - HL/ HLE/ HSC Series

HL/ HLE/ HSC - Total Heating Capacity					
Model	Coil Rows	Coil Performance			
		HFC Supply Air CFM	Water Flow GPM	Total Heating Capacity MBH	WPD FT
HL/ HLE 600	4	600	3.50	34.6	1.9
HL/ HLE 800	4	800	5.00	45.2	3.5
HL/ HLE 1000	4	1000	5.50	57.6	5.3
HL/ HLE 1200	4	1200	6.00	66.5	6.2
HL/ HLE 1400	4	1400	6.50	78.6	8.6
HL/ HLE 1600	4	1600	7.00	87.3	9.8
HL/ HLE 1800	4	1800	7.50	99.3	13.0
HL/ HLE 2000	4	2000	8.00	107.9	13.3
HSC 600	2	600	2.00	24.4	2.5
HSC 800	2	800	2.50	30.2	3.7
HSC 1000	2	1000	3.00	39.8	6.5
HSC 1200	2	1200	3.50	45.8	7.1
HSC 1400	2	1400	4.00	55.4	11.1
HSC 1600	2	1600	4.50	61.5	13.7
HSC 1800	2	1800	5.00	71.1	14.6
HSC 2000	2	2000	5.50	77.2	15.3

Note: Capacities are based on EAT at 68°F and EWT at 140°F. Contact factory for job specific capacities.

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Sound Pressure Level

LL/ LLE/ LSC Series

Unit Size	Fan Speed	Octave Bands / Center Frequency (Hz)								Noise Criterion (NC)
		1	2	3	4	5	6	7	8	
		63	125	250	500	1000	2000	4000	8000	
200	H	42.7	36.3	30.0	25.3	19.0	14.6	7.8	6.4	25
	M	42.0	35.0	27.3	21.1	14.3	9.7	2.8	3.4	17
	L	41.3	33.8	24.7	16.8	9.5	4.8	2.1	0.4	14
300	H	44.6	39.5	37.2	37.1	32.0	28.4	21.6	14.7	32
	M	42.8	37.2	31.3	27.1	21.4	16.7	10.0	7.5	21
	L	42.6	35.8	29.3	24.4	17.8	13.6	6.7	5.8	18
400	H	44.6	41.6	44.0	43.4	40.4	37.0	32.1	26.0	39
	M	44.2	38.8	35.2	33.3	28.3	24.5	16.7	10.5	28
	L	44.0	38.2	31.5	27.7	22.3	17.8	10.5	8.2	22
600	H	46.9	45.0	46.4	47.5	44.4	41.8	35.2	29.1	43
	M	43.9	40.1	40.0	40.2	35.7	34.0	28.8	22.1	35
	L	44.4	39.3	37.0	37.2	32.2	28.3	21.3	14.4	32
800	H	47.3	43.6	46.1	46.7	42.5	38.6	32.3	27.1	42
	M	45.0	40.8	40.6	40.8	36.5	32.5	25.1	19.1	36
	L	44.7	39.3	37.7	37.2	32.2	27.5	19.1	13.2	32
1000	H	47.6	48.2	51.8	52.0	47.9	44.8	38.8	34.0	48
	M	45.2	42.6	46.0	45.4	41.2	37.7	30.8	25.2	41
	L	44.6	39.4	40.9	41.0	36.9	32.3	24.8	18.7	36
1200	H	48.0	50.7	54.9	55.0	50.5	48.0	42.8	38.3	51
	M	45.9	45.6	48.6	49.9	45.1	42.0	36.2	31.0	46
	L	45.0	42.7	45.8	45.2	41.0	37.5	30.8	25.1	40

Note:
- Unit was tested in 465m^3 (16,421 ft^3) reverberation room
- Performance is based on multi-speed ECM motors
- Measurement was taken at a distance of 1.5 metres, close to two adjacent flat surfaces perpendicular to each other; able to radiate to one fourth of a sphere
- Unit tested fully exposed

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1-800-397-3680 info@uniluxhvac.com

Sound Power Level

LL/ LLE/ LSC Series

Unit Size	Fan Speed	Octave Bands / Center Frequency (Hz)								Noise Criterion (NC)
		1	2	3	4	5	6	7	8	
		63	125	250	500	1000	2000	4000	8000	
200	H	51.2	44.8	38.5	33.8	27.5	23.1	16.3	14.9	25
	M	50.5	43.5	35.8	29.6	22.8	18.2	11.9	11.3	17
	L	49.8	42.3	33.2	25.3	18.0	13.3	8.9	6.4	14
300	H	53.1	48.0	45.7	45.6	40.5	36.9	30.1	23.2	32
	M	51.3	45.7	39.8	35.6	29.9	25.2	18.5	16.0	21
	L	51.1	44.3	37.8	32.9	26.3	22.1	15.2	14.3	18
400	H	53.1	50.1	52.5	51.9	48.9	45.5	40.6	34.5	39
	M	52.7	47.3	43.7	41.8	36.8	33.0	25.2	19.0	28
	L	52.5	46.7	40.0	36.2	30.8	26.3	19.0	16.7	22
600	H	55.4	53.5	54.9	56.0	52.9	50.3	43.7	37.6	43
	M	52.5	48.6	48.5	48.7	44.2	42.5	37.3	30.6	35
	L	52.9	47.8	45.5	45.7	40.7	36.8	29.8	22.9	32
800	H	55.8	52.1	54.6	55.2	51.0	47.1	40.8	35.6	42
	M	53.5	49.3	49.1	49.3	45.0	41.0	33.6	27.6	36
	L	53.2	47.8	46.2	45.7	40.7	36.0	27.6	21.7	32
1000	H	56.1	56.7	60.3	60.5	56.4	53.3	47.3	42.5	48
	M	53.7	51.1	54.5	53.9	49.7	46.2	39.3	33.7	41
	L	53.1	47.9	49.4	49.5	45.4	40.8	33.3	27.2	36
1200	H	56.5	59.2	63.4	63.5	59.0	56.5	51.3	46.8	51
	M	54.4	54.1	57.1	58.4	53.6	50.5	44.7	49.5	46
	L	53.5	51.2	54.3	53.7	49.5	46.0	39.3	33.6	40

Note:
- Unit was tested in 465m^3 (16,421 ft^3) reverberation room
- Performance is based on multi-speed ECM motors
- Measurement was taken at a distance of 1.5 metres, close to two adjacent flat surfaces perpendicular to each other; able to radiate to one fourth of a sphere
- Unit tested fully exposed

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1-800-397-3680 info@uniluxhvac.com

Sound Pressure Level

HL/ HLE/ HSC Series

Unit Size	Fan Speed	Octave Bands / Center Frequency (Hz)								Noise Criterion (NC)
		1	2	3	4	5	6	7	8	
		63	125	250	500	1000	2000	4000	8000	
600	H	47.2	45.1	46.7	47.7	44.4	42.0	35.3	29.2	43
	M	44.2	40.4	40.3	40.6	36.1	34.3	29.2	22.2	36
	L	44.1	39.5	37.8	37.7	32.7	28.5	21.9	14.8	33
800	H	47.6	43.9	46.3	46.7	42.8	38.9	32.5	27.4	42
	M	45.3	41.0	40.9	41.1	36.7	32.6	25.4	19.4	36
	L	44.8	39.6	38.1	37.5	32.4	27.9	19.4	13.6	33
1000	H	50.4	50.0	49.3	48.2	47.4	45.2	44.8	36.0	47
	M	47.2	46.7	46.1	45.3	44.1	42.4	40.8	30.7	43
	L	42.9	42.1	41.5	41.0	41.7	40.3	37.8	26.3	41
1200	H	50.4	49.9	49.2	48.6	47.6	45.4	45.1	36.2	47
	M	47.0	46.3	46.2	45.4	44.2	42.5	40.9	30.9	44
	L	42.6	42.1	41.8	41.2	41.9	40.3	38.0	26.4	41
1400	H	50.3	50.1	49.6	49.1	47.9	45.9	45.6	37.0	48
	M	47.1	46.4	45.9	45.8	44.6	42.7	41.2	31.7	44
	L	42.3	41.9	41.5	41.5	42.1	40.7	38.7	27.0	42
1600	H	50.7	50.3	50.1	49.5	48.3	46.4	45.8	37.3	48
	M	47.5	46.9	46.4	46.1	45.0	42.9	41.5	32.2	44
	L	43.1	42.8	42.2	41.8	42.7	40.9	39.2	27.6	42
1800	H	51.1	50.8	50.5	50.2	50.1	47.6	46.9	37.9	49
	M	48.8	48.2	47.5	46.9	45.7	43.5	42.7	33.0	45
	L	43.8	43.1	42.8	42.4	43.2	41.7	40.0	28.1	43
2000	H	53.1	52.3	52.0	51.4	51.4	49.1	48.6	39.2	51
	M	49.7	49.1	48.4	47.8	46.3	45.3	44.2	34.5	46
	L	45.6	44.9	44.2	43.8	44.9	43.5	41.9	29.6	45

Note:
- Unit was tested in 465m^3 (16,421 ft^3) reverberation room
- Performance is based on multi-speed ECM motors
- Measurement was taken at a distance of 1.5 metres, close to two adjacent flat surfaces perpendicular to each other; able to radiate to one fourth of a sphere
- Unit tested fully exposed

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Sound Power Level

HL/ HLE/ HSC Series

Unit Size	Fan Speed	Octave Bands / Center Frequency (Hz)								Noise Criterion (NC)
		1	2	3	4	5	6	7	8	
		63	125	250	500	1000	2000	4000	8000	
600	H	55.7	53.6	55.2	56.2	52.9	50.5	43.8	37.7	43
	M	53.2	48.9	48.8	49.1	44.6	42.8	37.7	30.7	36
	L	52.7	48.0	46.3	46.2	41.2	37.0	30.4	23.3	33
800	H	56.1	52.4	54.8	55.2	51.3	47.4	41.0	35.9	42
	M	53.8	49.5	49.4	49.6	45.2	41.1	33.9	27.9	36
	L	53.3	48.1	46.6	46.0	40.9	36.4	27.9	22.1	33
1000	H	58.9	58.5	57.8	56.7	55.9	53.7	53.3	44.5	47
	M	55.7	55.2	54.6	53.8	52.6	50.9	49.3	39.2	43
	L	51.4	50.6	50.0	49.5	50.2	48.8	46.3	34.8	41
1200	H	58.9	58.4	57.7	57.1	56.1	53.9	53.6	44.7	47
	M	55.5	54.8	54.7	53.9	52.7	51.0	49.4	39.4	44
	L	51.1	50.6	50.3	49.7	50.4	48.8	46.5	34.9	41
1400	H	58.8	58.6	58.1	57.6	56.4	54.4	54.1	45.5	48
	M	55.6	54.9	54.4	54.3	53.1	51.2	49.7	40.2	44
	L	50.8	50.4	50.0	50.0	50.6	49.2	47.2	35.5	42
1600	H	59.2	58.8	58.6	58.0	56.8	54.9	54.3	45.8	48
	M	56.0	55.4	54.9	54.6	53.5	51.4	50.0	40.7	44
	L	51.6	51.3	50.7	50.3	51.2	49.4	47.7	36.1	42
1800	H	59.6	59.3	59.0	58.7	58.6	56.1	55.4	46.4	49
	M	57.3	56.7	56.0	55.4	54.2	52.0	51.2	41.5	45
	L	52.3	51.6	51.3	50.9	51.7	50.2	48.5	36.6	43
2000	H	61.6	60.8	60.5	59.9	59.9	57.6	57.1	47.7	51
	M	58.2	57.6	56.9	56.3	54.8	53.8	52.7	43.0	46
	L	54.1	53.4	52.7	52.3	53.4	52.0	50.4	38.1	45

Note:
- Unit was tested in 465m^3 (16,421 ft^3) reverberation room
- Performance is based on multi-speed ECM motors
- Measurement was taken at a distance of 1.5 metres, close to two adjacent flat surfaces perpendicular to each other; able to radiate to one fourth of a sphere
- Unit tested fully exposed

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Submittal Data

Fan Coil Piping (Optional)

The piping branches are constructed using ½" or ¾" Type "L" copper and stainless steel braided flex hoses. They are equipped with shut-off ball valves and flare nut connections on both the supply and return branches, allowing for easy removal and maintenance. Fan coil pipe packages generally exist between coils and hoses.

Hose Kits

When installing hose kits, ensure that hoses are not routed over electrical components such as junction boxes or actuators. As hoses are not condensation-resistant, field insulation is recommended.

Prior to installation, inspect the sealing surfaces to confirm they are smooth, flat, and free from damage such as scratches or sharp edges. When connecting threaded unions, avoid over-tightening, as this may damage the gasket or sealing surface and lead to leaks. Hand-tighten the union first, then use a wrench to tighten an additional maximum of 1/4 turn.

Do not apply pipe dope or thread sealant to the sealing surfaces or threads of a flare connection. Connect the hoses by hand, then carefully tighten fittings to avoid damaging the water lines (max torque for ½" hose is 40ft lbs; max torque for ¾" hose is 55 ft lbs + 10%-0). Use a wrench to hold the valve steady and a torque wrench to tighten the nut. Before starting the unit, confirm all connections are leak-free. If a leak is detected, tighten slightly, not exceeding an additional 1/4 turn. Improper installation may result in leaks or operational issues.

Coil Identification

The diagrams provided indicate the number of coil rows and the arrangement of chilled and hot water coils. Standard configurations place the hot water coil in the reheat (downstream) position.

Due to variations in coil circuiting, inlet and outlet locations may differ vertically. However, the following guidelines always apply: the inlet connection is the lower connection and is positioned farthest from the entering air side, while the outlet connection is the upper connection and closest to the entering air side.

Two-Pipe Coils

Two-pipe coils are designed with a single inlet and outlet connection. Fan coil units may include coils ranging from one to four rows. These coils can operate with either 100% chilled water or 100% hot water. In a two-pipe system, the chiller and boiler function independently and do not operate simultaneously.

Coil connections are configured with the inlet at the bottom and the outlet at the top. Coils may contain one or more circuits, which are incorporated to maintain an acceptable water pressure drop. Depending on the selected circuiting arrangement, the inlet and outlet positions may vary.

Four-Pipe Coils

Four-pipe systems utilize integrated coils for chilled water and hot water, each with its own inlet and outlet, resulting in four total pipe connections. For example, a configuration with a four-row chilled water coil and a one-row hot water coil is constructed as a five-row coil assembly, with the hot water coil typically positioned downstream (reheat position) of the cooling coil.

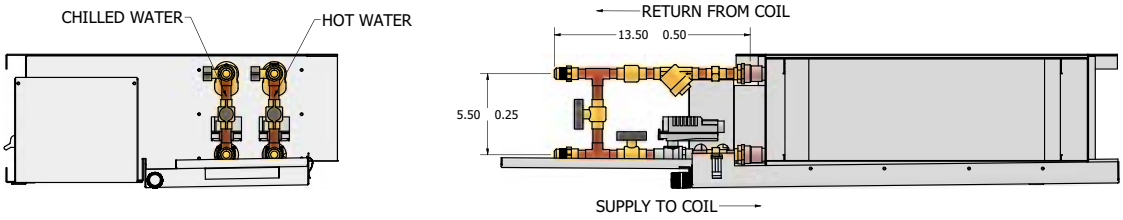
The same inlet and outlet orientation rules apply as described for two-pipe coils. Since each coil is independently controlled, a pipe sensor is not required.

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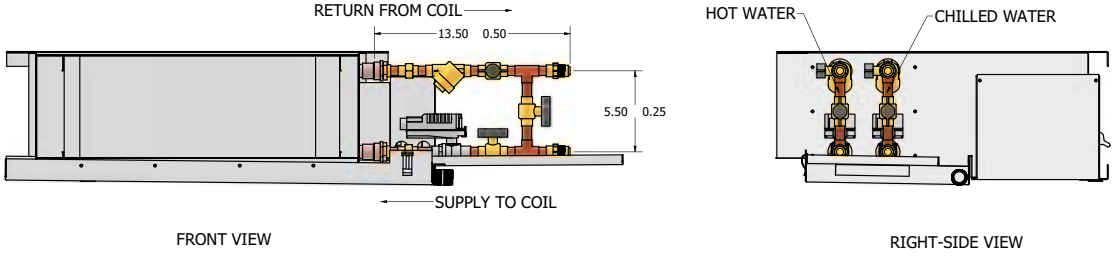
Piping Configurations

2 Way Valve Package with Bypass - LSC/ LL/ LLE

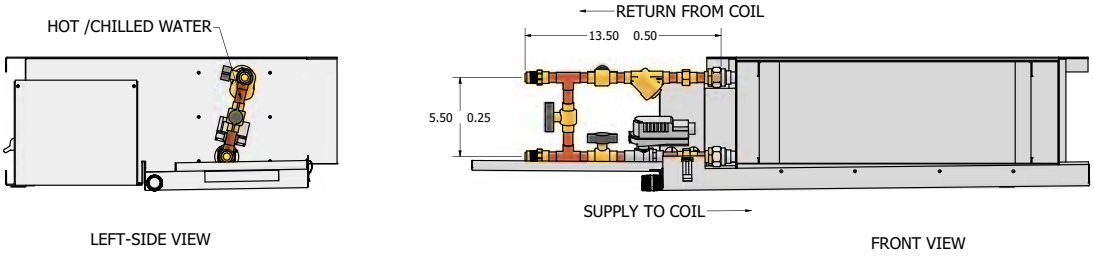
LSC - Left Hand Configuration



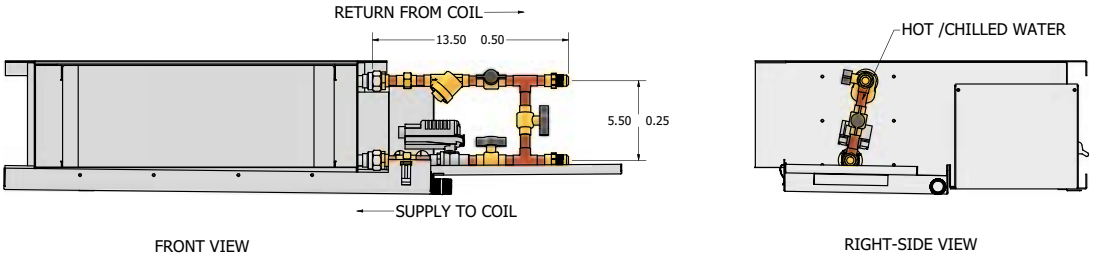
LSC - Right Hand Configuration



LL/ LLE - Left Hand Configuration



LL/ LLE - Right Hand Configuration

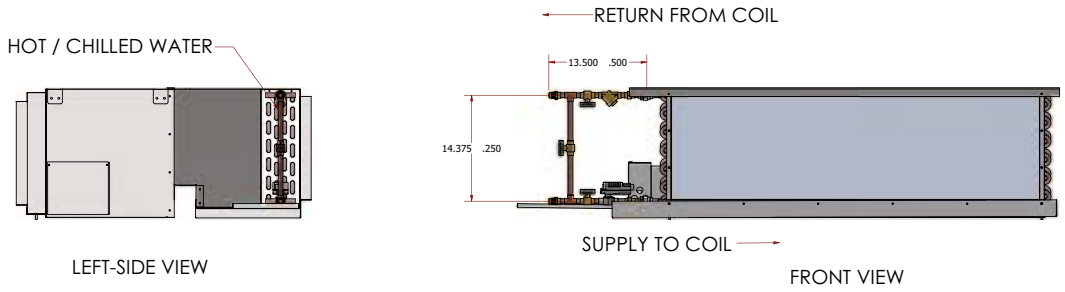


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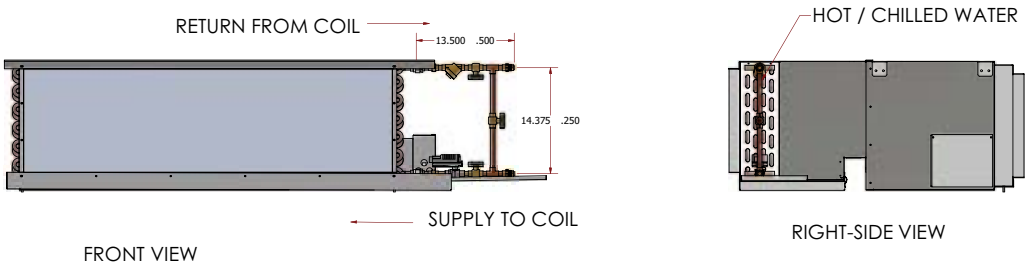
Piping Configurations

2 Way Valve Package with Bypass - HL/ HLE/ HSC

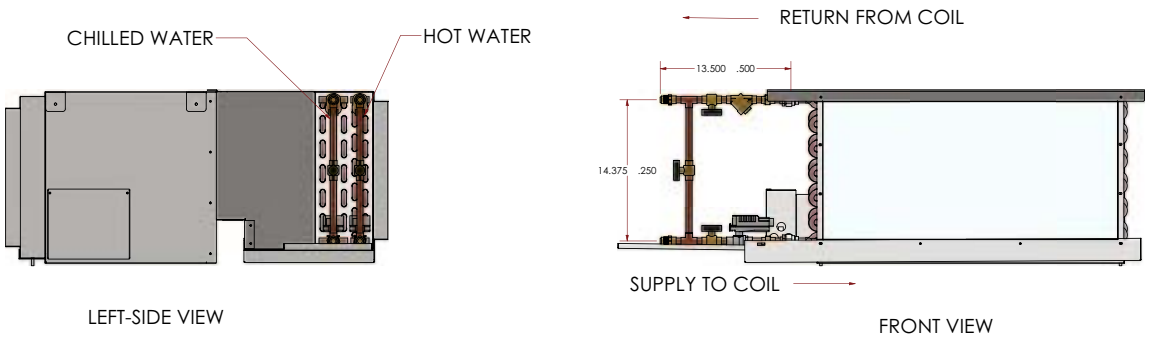
HL/ HLE - Left Hand Configuration



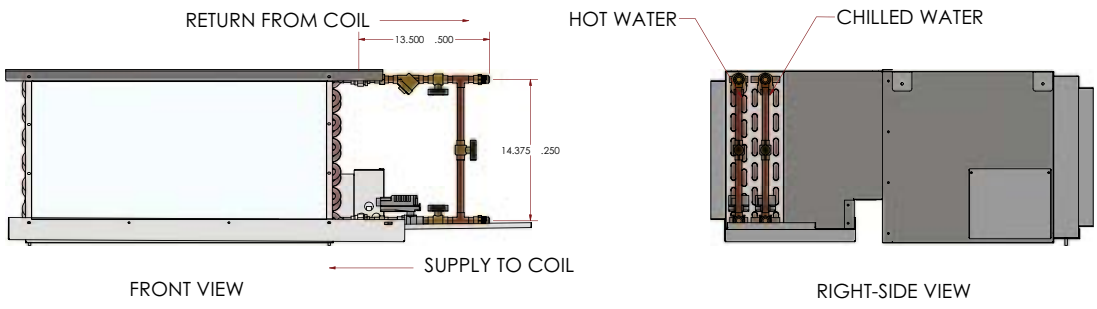
HL/ HLE - Right Hand Configuration



HSC - Left Hand Configuration



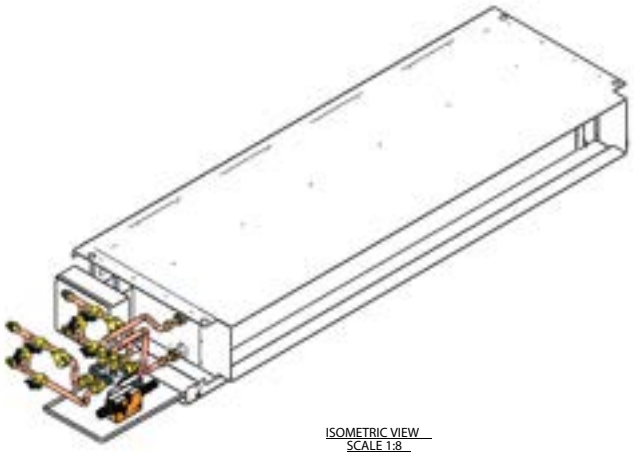
HSC - Right Hand Configuration



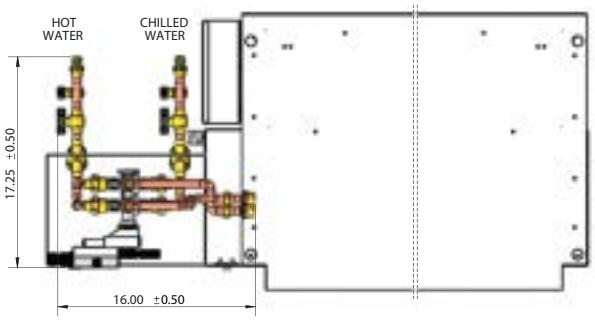
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Piping Configurations

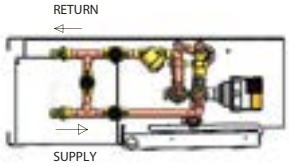
6 Way Belimo Valve Package with Bypass - LH



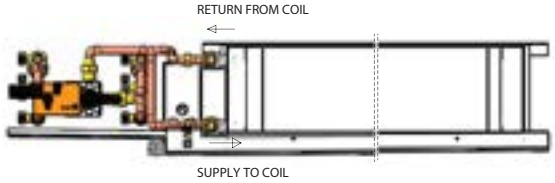
ISOMETRIC VIEW
SCALE 1:8



TOP VIEW



LEFT-SIDE VIEW

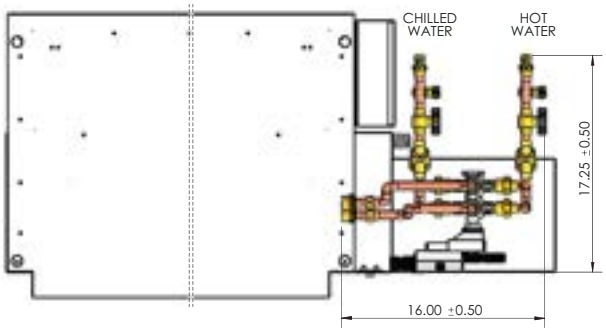


FRONT VIEW

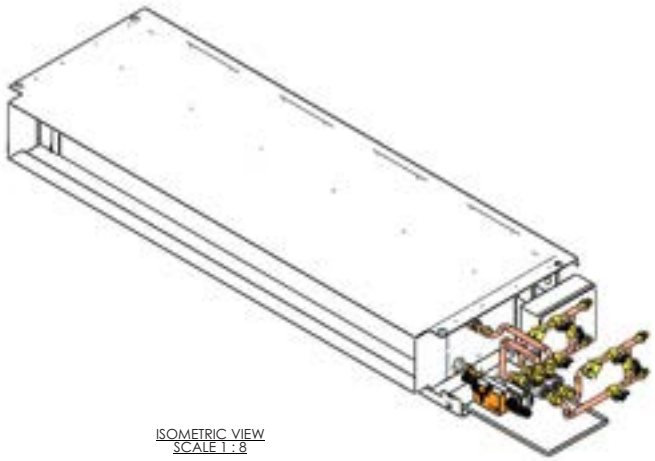
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Piping Configurations

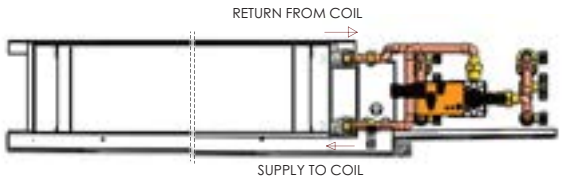
6 Way Belimo Valve Package with Bypass - RH



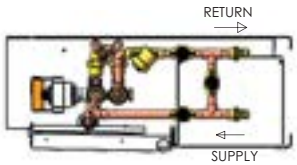
TOP VIEW



ISOMETRIC VIEW
SCALE 1 : 8



FRONT VIEW

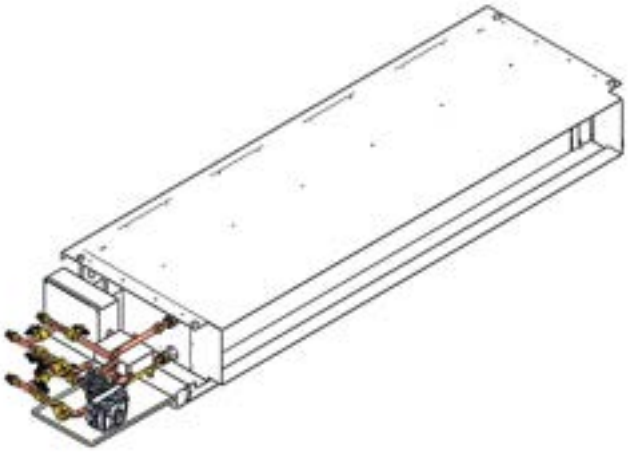


RIGHT-SIDE VIEW

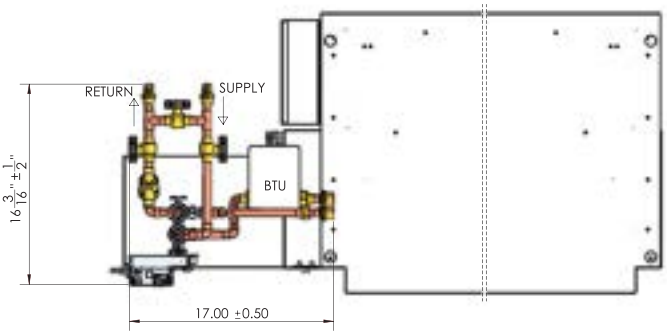
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Piping Configurations

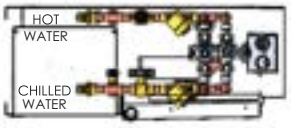
6 Way JCI Valve Package with Bypass & BTU Meter - LH



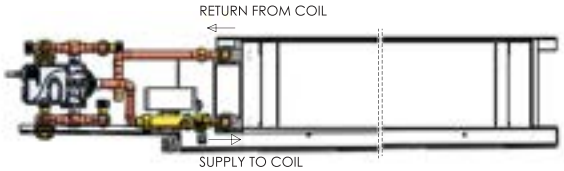
ISOMETRIC VIEW
SCALE 1 : 8



TOP VIEW



LEFT-SIDE VIEW

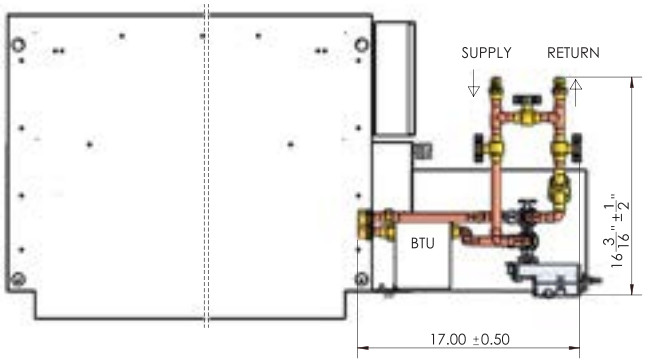


FRONT VIEW

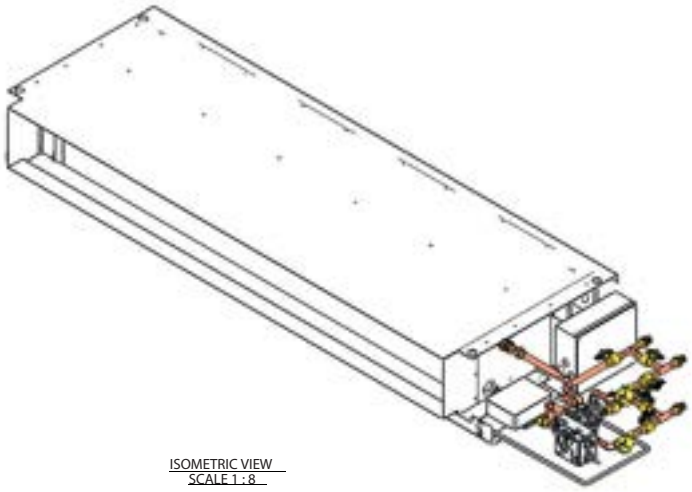
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Piping Configurations

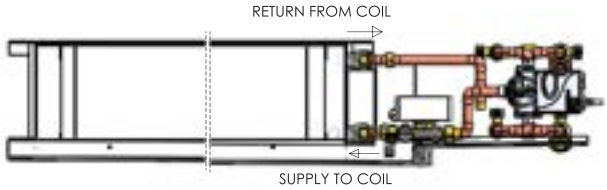
6 Way JCI Valve Package with Bypass & BTU Meter - RH



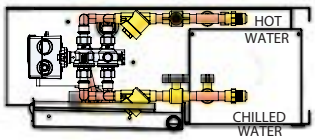
TOP VIEW



ISOMETRIC VIEW
SCALE 1 : 8



FRONT VIEW

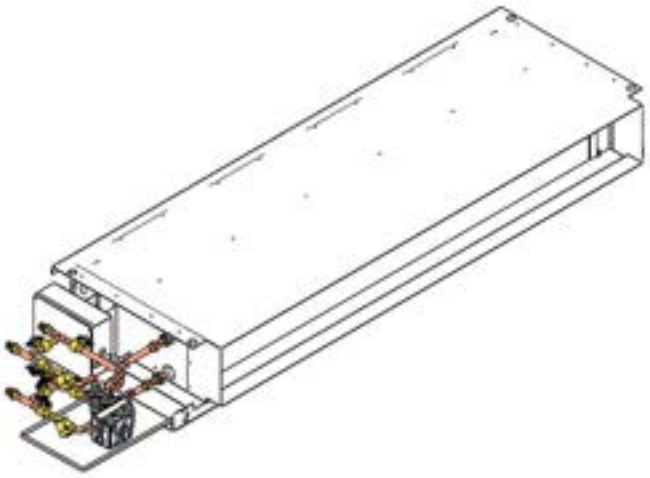


RIGHT-SIDE VIEW

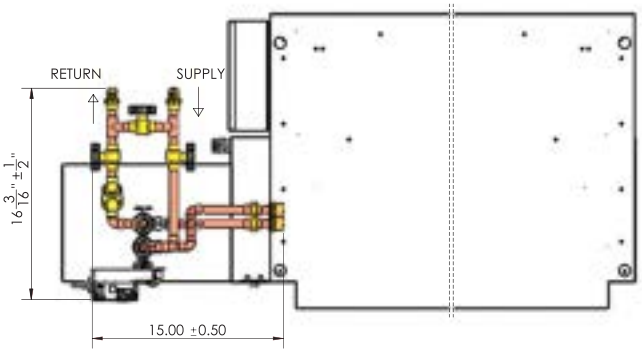
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Piping Configurations

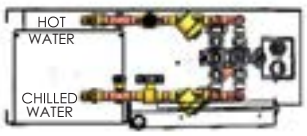
6 Way JCI Valve Package with Bypass- LH



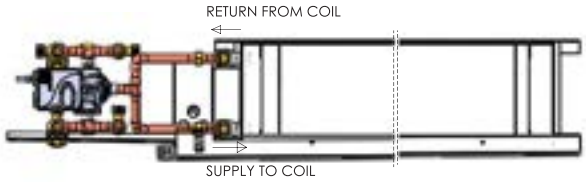
ISOMETRIC VIEW
SCALE 1 : 8



TOP VIEW



LEFT-SIDE VIEW

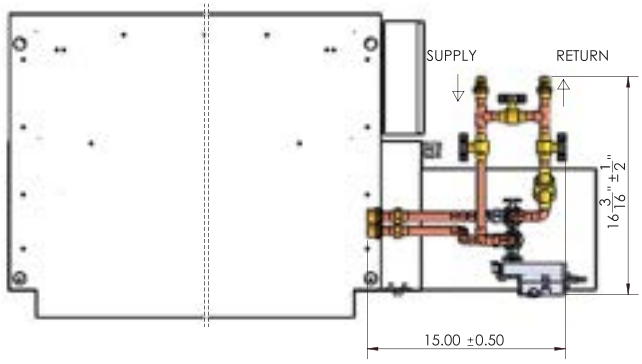


FRONT VIEW

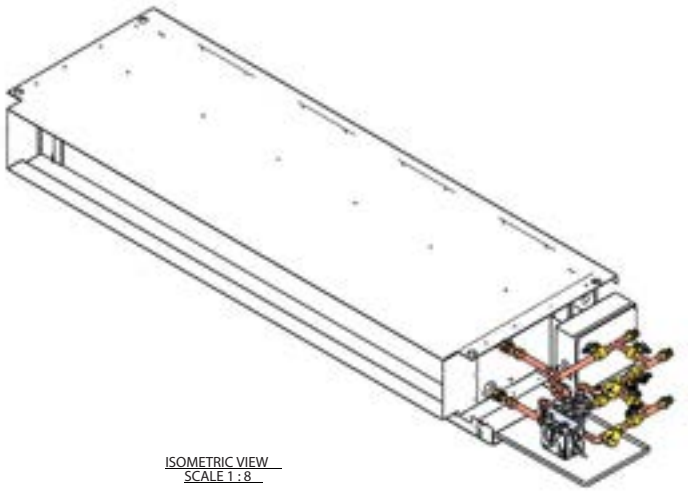
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Piping Configurations

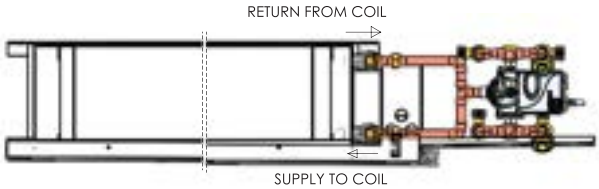
6 Way JCI Valve Package with Bypass - RH



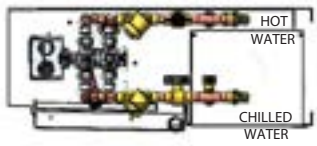
TOP VIEW



ISOMETRIC VIEW
SCALE 1 : 8



FRONT VIEW

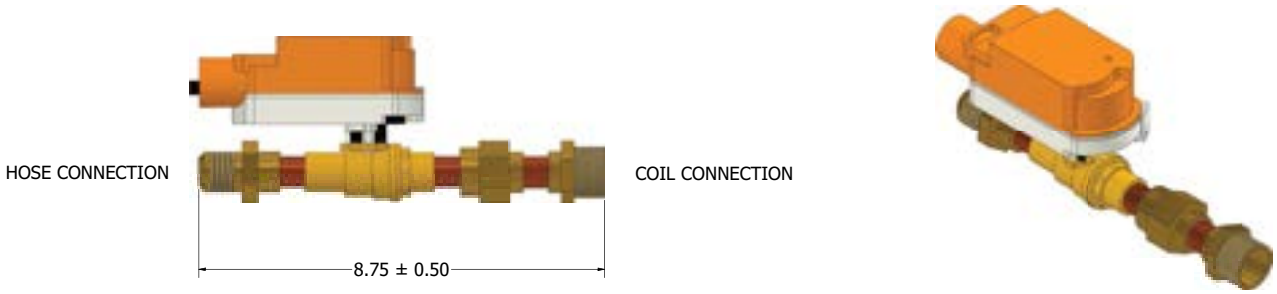


RIGHT-SIDE VIEW

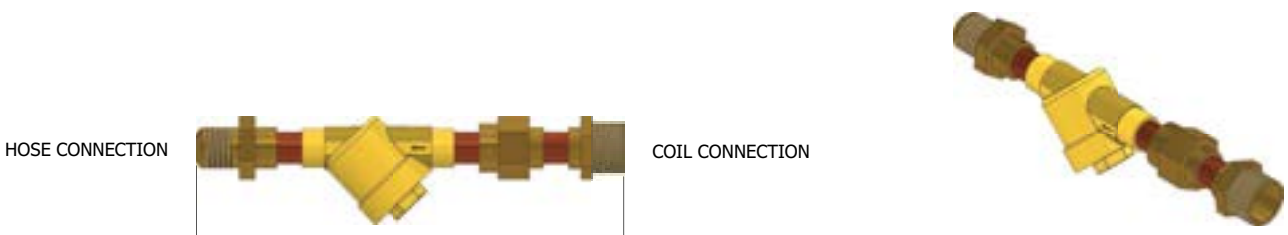
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Piping Configurations

2 Way Valve Package



SUPPLY LINE VALVE PACKAGE

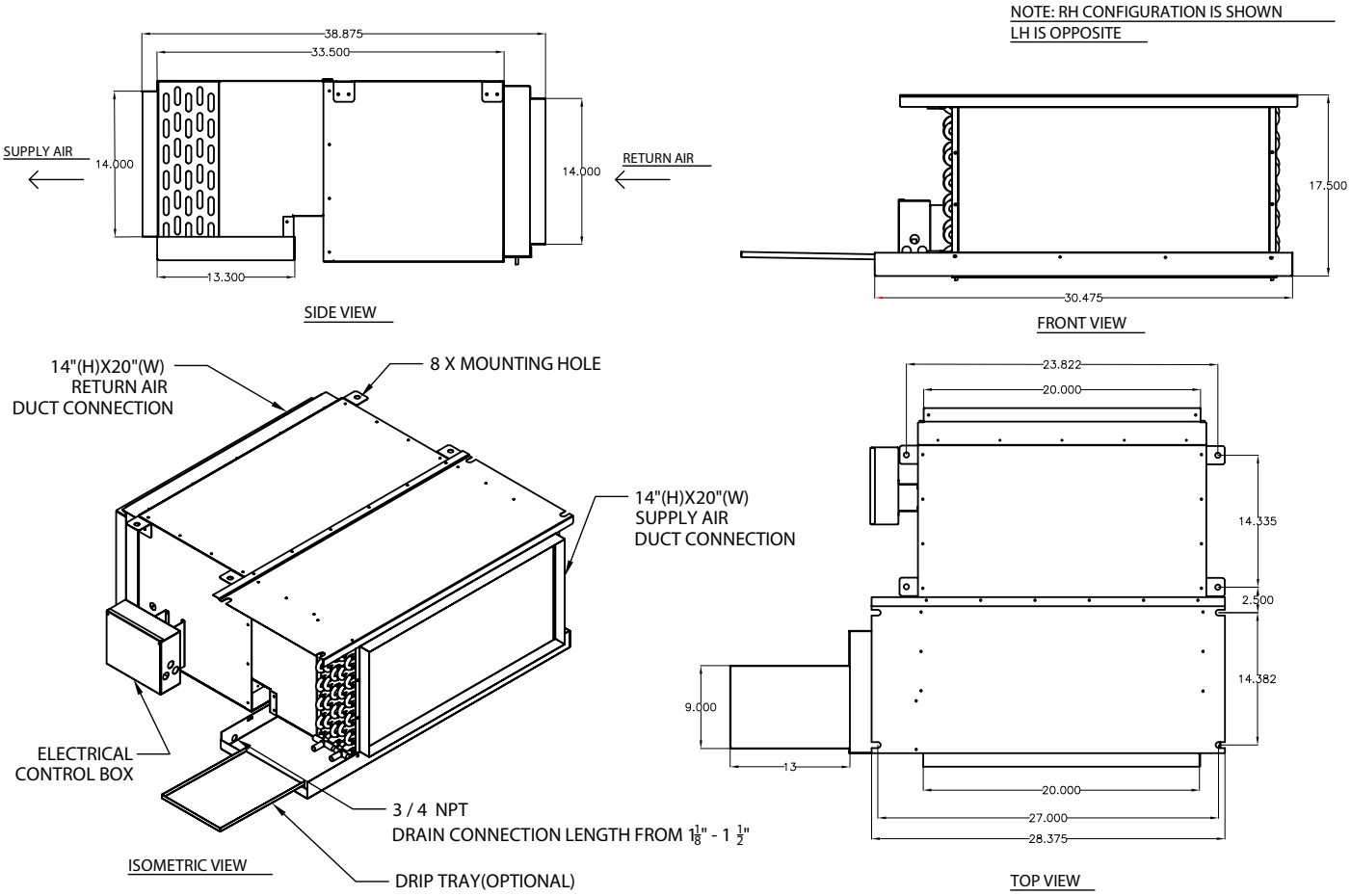


RETURN LINE VALVE PACKAGE

7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Cabinet Drawings & Dimensions

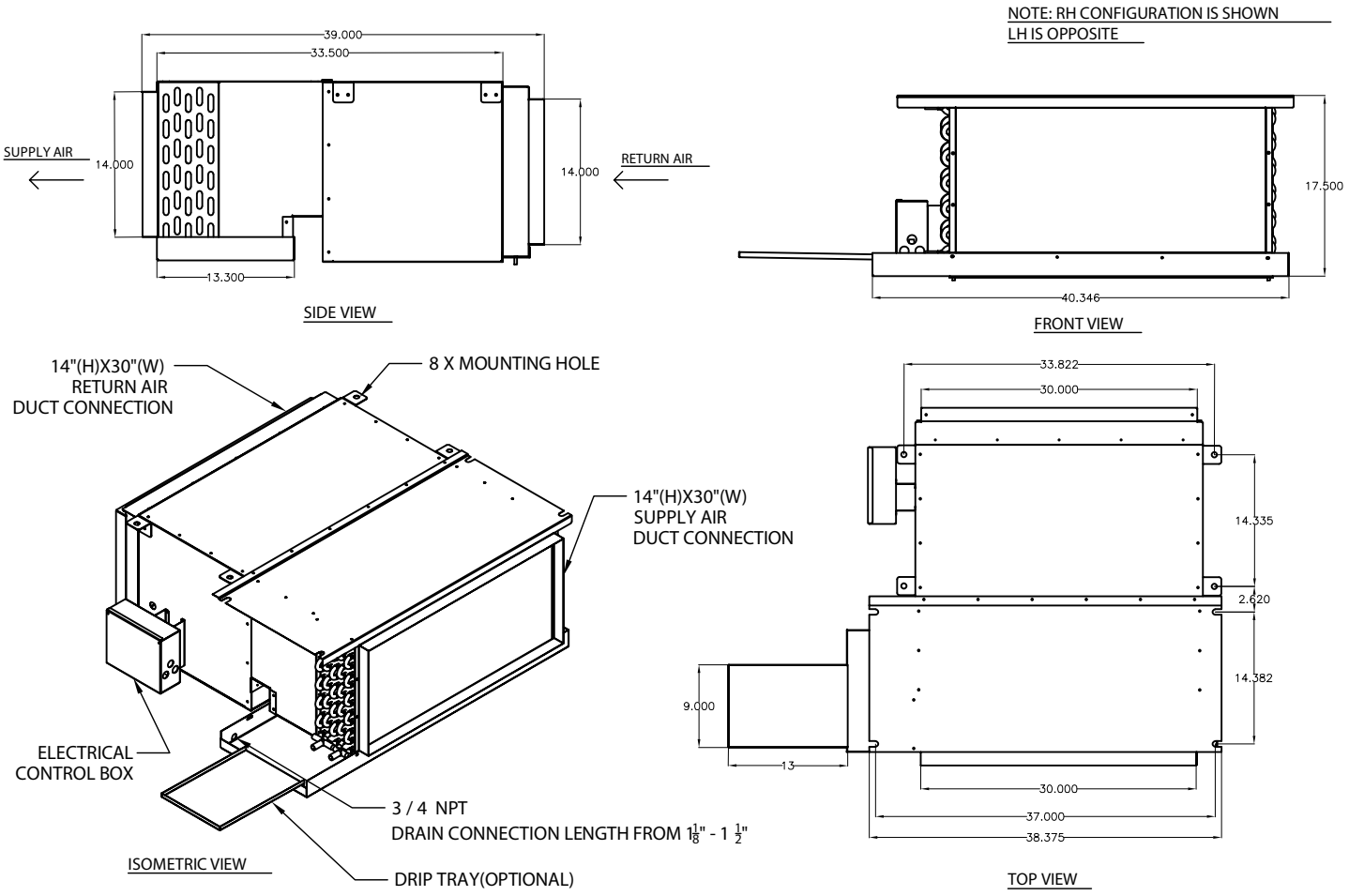
HL/ HLE/ HSC - 600-800



7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Cabinet Drawings & Dimensions

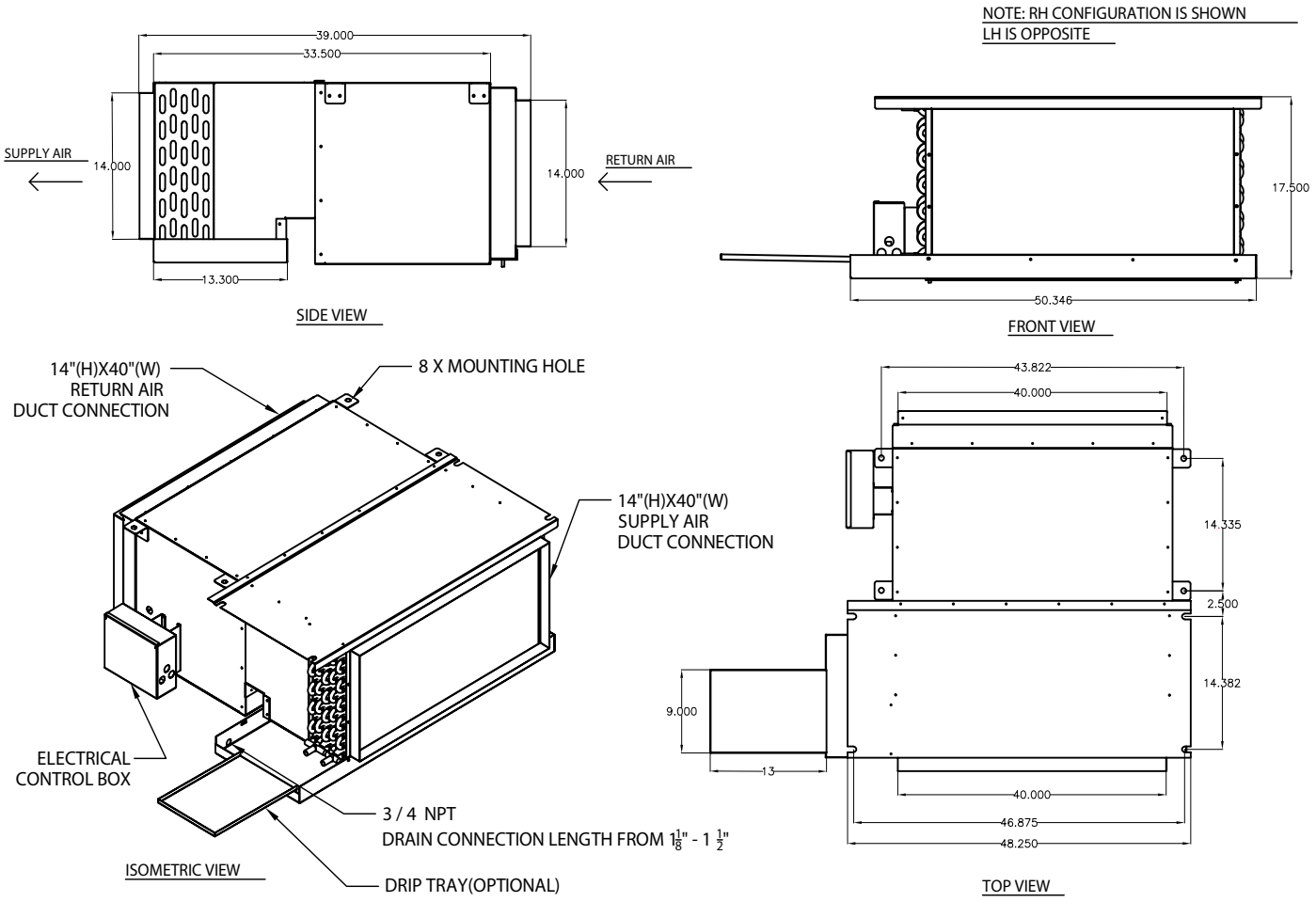
HL/ HLE/ HSC - 1000-1200



7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Cabinet Drawings & Dimensions

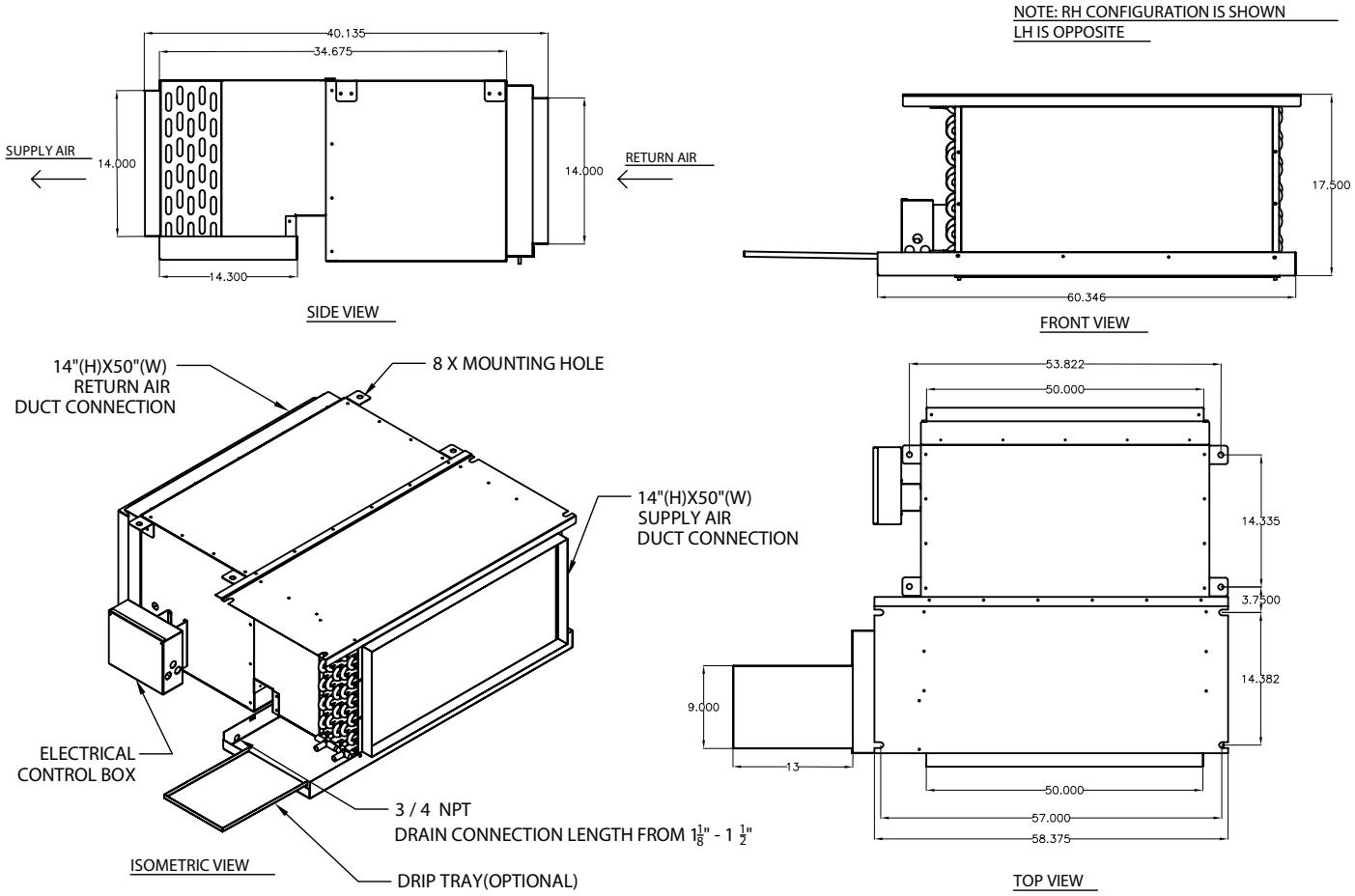
HL/ HLE/ HSC - 1400-1600



7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
1-800-397-3680 info@uniluxhvac.com

Cabinet Drawings & Dimensions

HL/ HLE/ HSC - 1800-2000

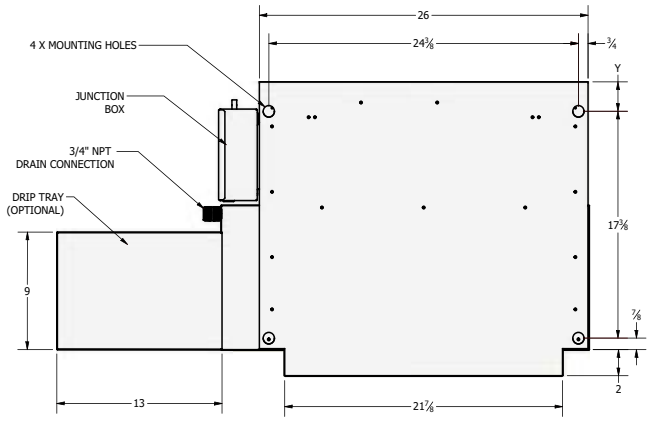


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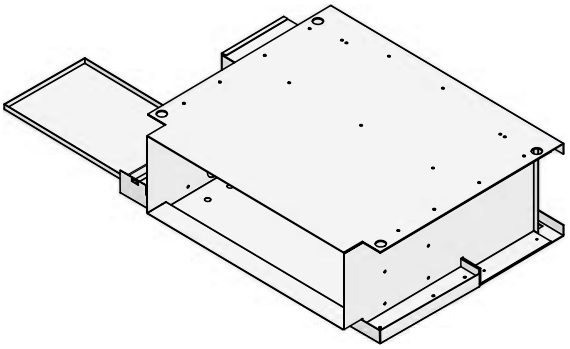
Cabinet Drawings & Dimensions

LL/ LLE/ LSC - 200-300

LH CONFIGURATION SHOWN,
RH CONFIGURATION IS OPPOSITE TO THIS

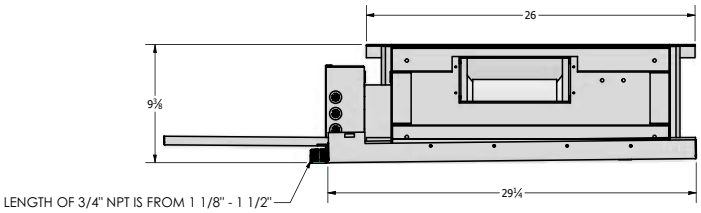


TOP VIEW

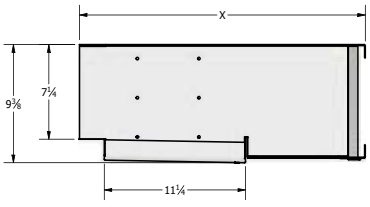


ISOMETRIC VIEW

SUPPLY AIR ← RETURN AIR



FRONT VIEW

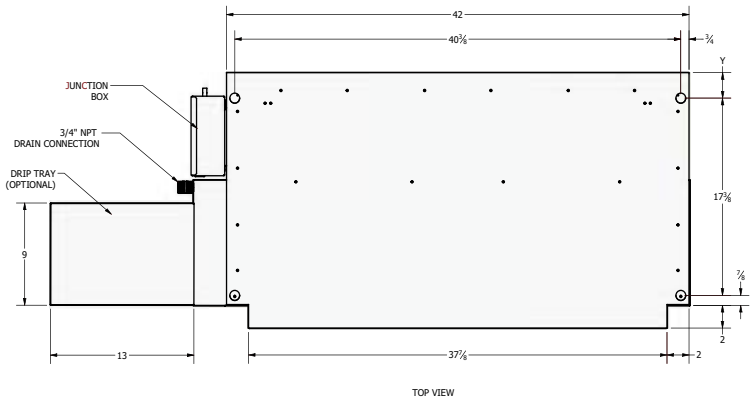


RIGHT-HAND VIEW

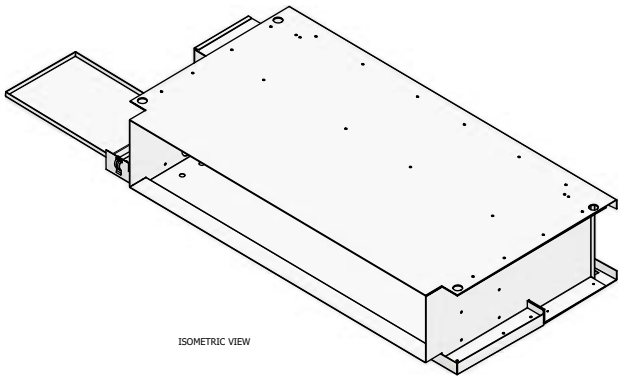
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Cabinet Drawings & Dimensions

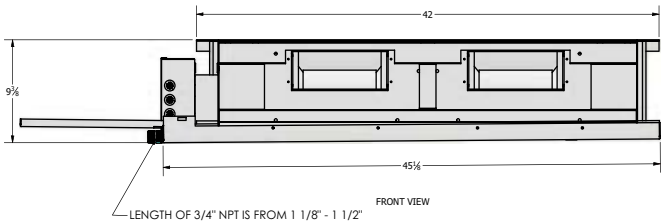
LL/ LLE/ LSC - 400-600



TOP VIEW

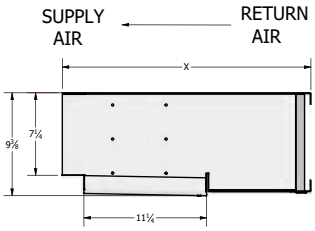


ISOMETRIC VIEW



FRONT VIEW

LENGTH OF 3/4" NPT IS FROM 1 1/8" - 1 1/2"



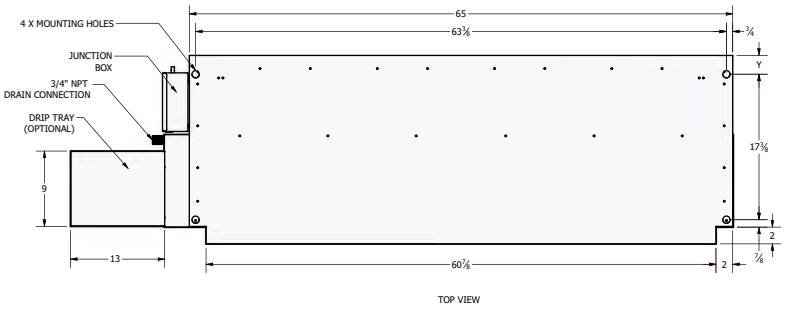
RIGHT-SIDE VIEW

7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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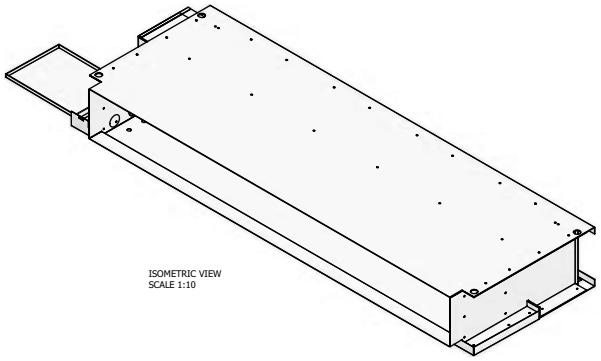
Cabinet Drawings & Dimensions

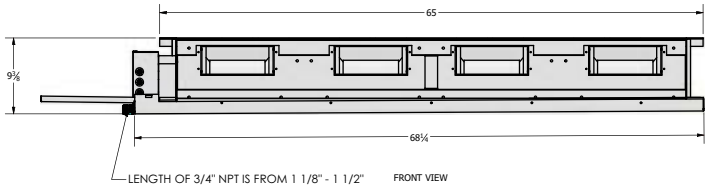
LL/ LLE/ LSC - 800-1000-1200

LH CONFIGURATION SHOWN,
RH CONFIGURATION IS OPPOSITE TO THIS

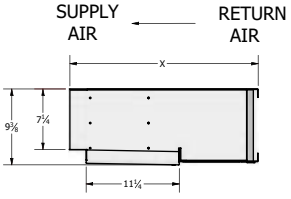


TOP VIEW





FRONT VIEW



RIGHT-SIDE VIEW

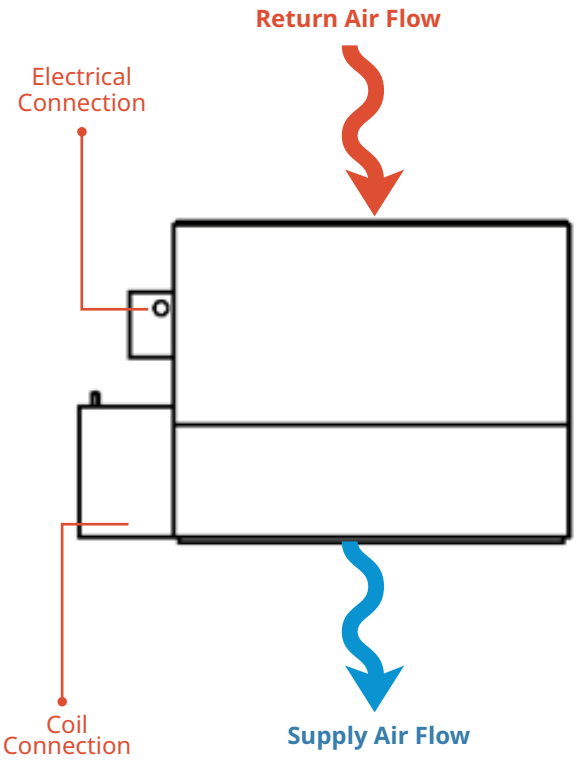
7930 Huntington Road Unit A, Woodbridge, ON L4H 4M8
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Airflow Configurations

Left Hand Unit



Front View
(Looking at Discharge)

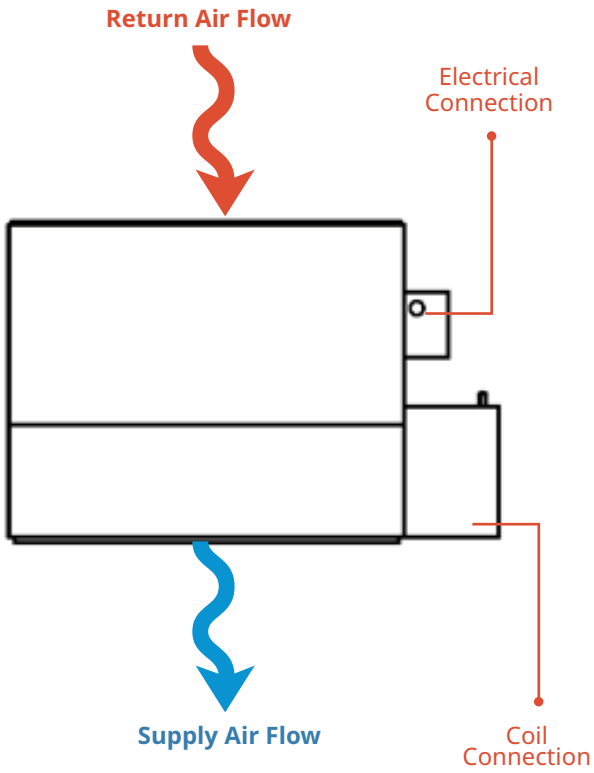


Top View

Right Hand Unit



Front View
(Looking at Discharge)



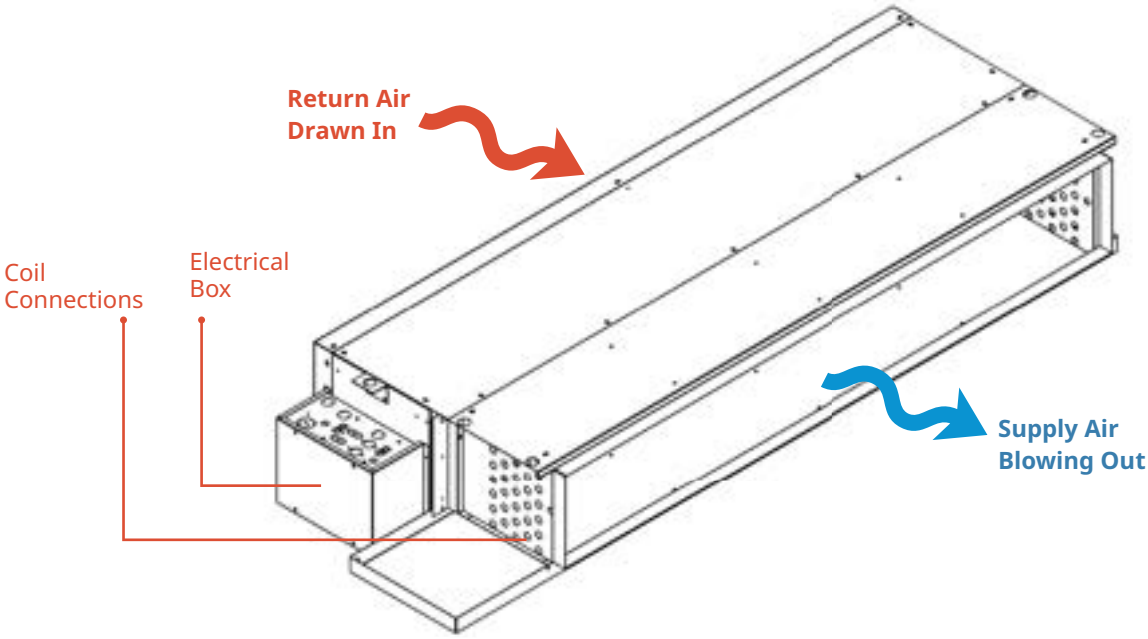
Top View

NOTE: Handing is determined by looking directly at the supply discharge or "air blowing in your face"and determining whether the coil/electrical connections are on the right or left. Arrows above denote air flow.

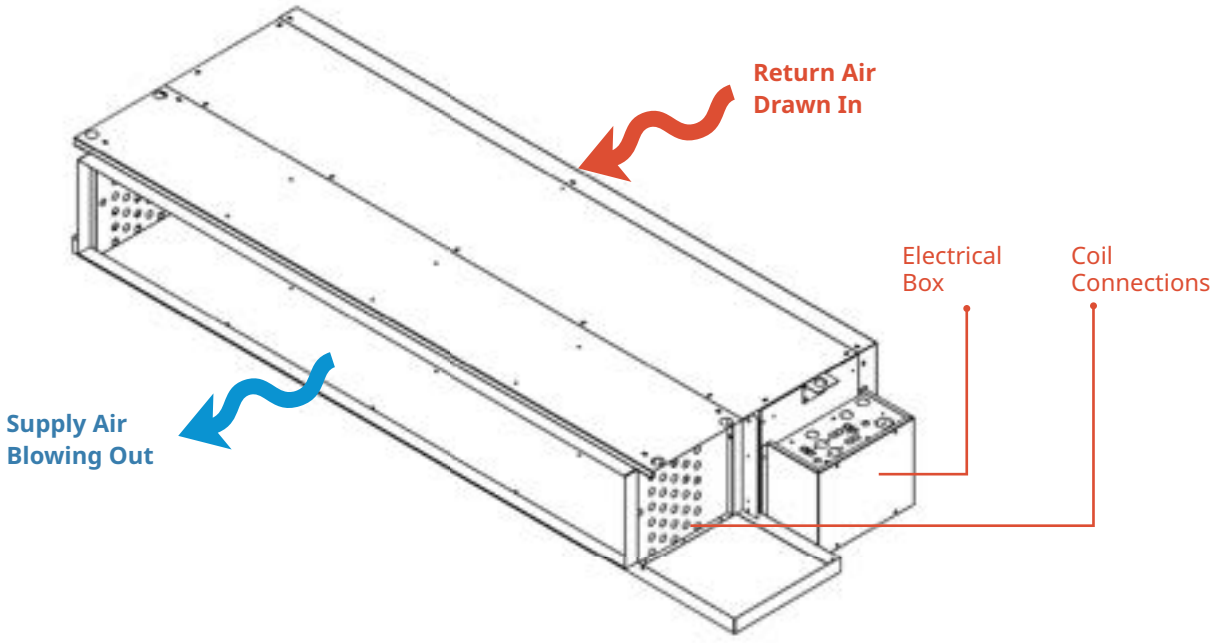
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Airflow Configurations

Left Hand Unit Isometric



Right Hand Unit Isometric



NOTE: Handing is determined by looking directly at the supply discharge or "air blowing in your face" and determining whether the coil/electrical connections are on the right or left. Arrows above denote air flow.

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Part 2:
Installation, Operation, and Maintenance

General Safety Guidelines

Warning & Safety Considerations

Your fan coil operates using components that require electricity and water under high pressure - potentially very hot water. Before using or maintaining your fan coil, it is very important that you understand all of the safety warnings located inside the cabinet.



Water Hazard
Indicates a potential hazard due to water which could result in flooding.



Hot Water Hazard
Indicates a potential hazard for burning due to extremely hot water.



Electrical Hazard
Indicates a potential electrical hazard which could result in electrical shock and/or fire.



Sharp Blades Hazard
Indicates a potential hazard due to sharp revolving blades which could result in cuts or amputation.



Freeze Hazard
Do NOT leave windows or doors open when the outside temperature is at or below freezing. Freezing air will freeze the water in your unit's coil, potentially causing flooding and water damage.

Important Information



The unit must be installed by a Unilux approved technician, following both the instructions provided in this manual and all applicable local building codes. Keep this guide in a secure location for future reference. The unit must remain accessible at all times for inspection and maintenance.

Handling Requirements

The unit should always be handled carefully to prevent damage to both its internal and external components. Since certain parts may have sharp edges, protective gloves must be worn during installation or adjustment. All procedures outlined below must comply with applicable health and safety regulations.

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Receipt, Storage, and Inspection

Arrival

When units are received at the site, carefully check for any damage incurred during shipment. If damaged, note it on the Carrier's Bill of Lading as "Damaged during Shipment" or "Received Damaged." Cross-check the packing slip against all items received. Note any missing items on the Carrier's Bill of Lading with "Shipment Received Less Item #____."

Storage

Store equipment in its original packaging as shipped on their pallets for protection in a clean, dry area. Do not stack the units. Use a waterproof tarp or equivalent covering if necessary to protect units from humid or high UV areas.



Caution: Avoid storing or installing units in corrosive environments or areas exposed to extreme temperatures or humidity (such as rooftops, garages, etc.). These conditions can greatly diminish performance, reliability, and the lifespan of the units. Always transport and store units in an upright position; laying them on their sides can result in equipment damage.



Caution: Physical damage or contamination can hinder unit start-up and cause equipment damage. Protect units at the job site by covering them with the original packaging or an equivalent protective covering and cap the open ends of pipes. Ensure all unit openings are covered throughout all stages of construction.

Pre-Installation Preparation

Read all provided Installation, Operation, and Maintenance (IOM) instructions and attached drawings before installation and unit start-up. Perform the following steps before proceeding to installation:



Note: Each installation is unique and may necessitate additional steps or adjustments to this Installation, Operation, and Maintenance (IOM) manual. Always follow the specific IOM instructions and drawings provided for each installation.



Caution: Keep all openings covered until the unit installation is complete and all surrounding work (including drywalling, painting, etc.) is finished.

☐ Verify that the unit nameplate matches the floor plan and ensure the power supply and breaker meet the requirements on the nameplate. Ensure the electrical data on the unit nameplate matches the ordering and shipping information.

☐ Perform a visual inspection of the fan coil and accessories to ensure they are not damaged and there is no debris inside the fan coil.

☐ Verify the cabinet's supply air openings match the size and location specified in the building plans.

☐ Ensure that each connection is clean and firmly secured at the terminals.



Warning: Sheet metal components often have sharp edges or burrs. Exercise caution and wear suitable protective gear, including safety glasses and gloves, during installation and while handling all fan coil components including the cabinet.

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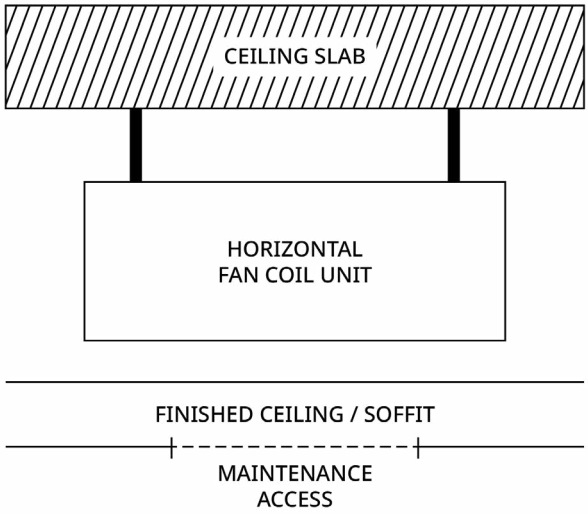
Installation

Installation Requirements

- The unit must be installed following all applicable local building codes.
- Personal protective equipment (PPE) must always be worn during installation.
- The unit must remain accessible for inspection and maintenance at all times. All covers must be removable to allow access.

Ceiling Installation

Dimensions (mm) for Installation into Ceiling.



Handling, Installation, & Commissioning

Checklist Before Installation

This unit should be installed above the false ceiling. Before starting installation, check:

- Space requirements and clearances
- Ceiling/mounting strength
- Piping connections
- Condensate drain connection
- Power supply and wiring
- Air duct connections
- Verify all critical dimensions for pipes, wires, and ducts by referring to:
  - The project drawings
  - The product dimension drawings (as required)

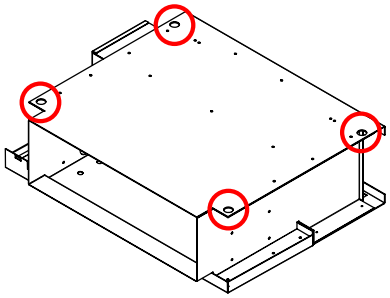
Also confirm:

- Unit power requirements match the available power source (refer to the wiring diagram).
- Rotate the fan wheel by hand to confirm it is not restricted and can rotate freely.
- The piping outlet (drain pan) and the control box are located on the right or left side relative to the airflow direction.
- Adjust the mounting screws so the fan coil is horizontally leveled and secure to ceiling (see diagrams below).
- Ensure enough clearance for maintenance and repair (see the relevant drawing).
- Avoid any rise in the condensate drain piping.
- Avoid slack in electrical connections.
- Avoid disconnecting water connections after installation.
- Ensure the unit is properly leveled; improper leveling can cause condensate dripping.
- Do not crush, flatten, or kink the pipes or condensate drain lines.

Note: The air duct installed on site must match the unit's required ESP/SP values.

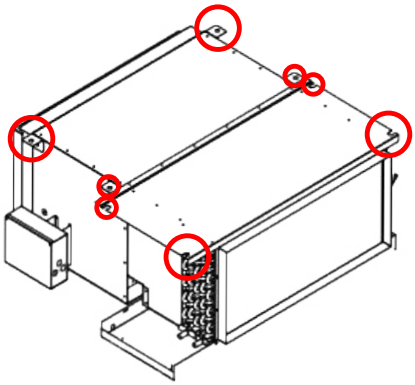
Low Profile Horizontal Fan Coils

- 4 Mounting Points (see below)



High Capacity Horizontal Fan Coils

- 8 Mounting Points (see below)



Condensate Drainage Guidance

- During cooling operation, condensation on the coil surface is collected in the pan under the coil and drained through the drain outlet on the coil connection side.
- To ensure correct condensate drainage:
  - The drain pipe must not be bent or restricted

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- It must be installed with the required slope (at least 2%) along its length
- Installed with a P trap

Before starting operation, confirm water flows into the internal condensate drain pan by pouring some water into it. If issues occur, check the drain pipe slope and inspect for obstructions.

Connection Details

- Water inlet/outlet: **3/4" FPT** when not provided with factory piping package. When piping package is provided, it has a flare connection.
- Drain connection: **3/4" MPT**.
- Use PTFE tape or pipe joint sealant for sealing.
- Before start-up, purge air out of the coil through the return line. Air trapped in the coil may reduce capacity and cause abnormal noise.

Proper vs. Improper Installation Overview

This section outlines common indicators of proper and improper installation for ceiling fan coil units. These conditions are intended to help installers, inspectors, and service personnel quickly assess whether a unit has been installed correctly and in accordance with manufacturer requirements. Improper installation of the unit can lead to noise & vibration problems.

Indicators of Proper Installation

A properly installed unit will exhibit the following conditions:

- The unit is securely mounted using approved mounting points and is installed level, maintaining a true horizontal coil plane.
- Adequate service and access clearances are maintained in accordance with product requirements.
- The drain pan is correctly positioned and pitched toward the drain outlet.
- Condensate drain piping is properly routed, securely supported, and sloped at a minimum of 1/8 inch per foot.
- Drain traps are installed and sized correctly where required to accommodate system static pressure.
- Drip tray is installed on the drain side of the coil assembly and positioned to direct condensate into the drain pan (when ordered).
- Valve packages and associated piping are arranged so all condensate drains into the primary drain pan, or drip tray.
- Piping is properly aligned, supported, and tightened using backup wrenches to prevent stress on coil connections.
- Electrical service matches the unit nameplate data and all wiring is completed in accordance with the factory wiring diagram and applicable codes.
- Fan motors are controlled using only factory-approved switches or thermostat combinations.
- Ductwork is fully connected and installed within allowable external static pressure limits.
- The unit interior is clean and free of debris, with all access panels and filters properly installed.
- The fan wheel rotates freely without contact, vibration, or obstruction.
- The condensate system has been functionally tested by introducing water into the drain pan and confirming unobstructed drainage.

Indicators of Improper Installation

Improper installation may be identified by one or more of the following conditions:

- The unit is not installed level, resulting in improper coil orientation or standing water in the drain pan.
- Structural support is insufficient, or mounting hardware is improperly installed, causing unit movement or vibration.
- Required service and access clearances are not maintained, preventing proper servicing or component removal.
- The drain pan is pitched away from the drain outlet or is otherwise improperly positioned.
- Condensate drain piping is not sloped adequately, is unsecured, or is routed in a manner that restricts flow.
- Drain traps are missing or incorrectly sized where required, leading to improper drainage or odor migration.
- Drip tray is missing, improperly located, or incorrectly installed, allowing condensate to discharge outside the drain pan.
- Piping and valve assemblies are misaligned, placing side load or torque on coil connections.
- Chilled water piping and valves uninsulated or inadequately insulated, resulting in condensation.
- Copper tubing is in direct contact with the steel cabinet without protective grommets or bushings.
- Electrical wiring is improperly routed, or does not comply with the factory wiring diagram.
- Fan motors are operated using non-approved controls or temporary wiring without factory authorization.
- Ductwork is missing, improperly connected, or outside allowable external static pressure limits.
- Construction debris or foreign material remains inside the unit cabinet.
- Fan wheel does not rotate freely or contacts the housing
- Condensate drainage has not been verified through functional testing.

Accessibility Requirements

Proper operation of the unit depends on strict adherence to installation and operating instructions. Ensure the following:

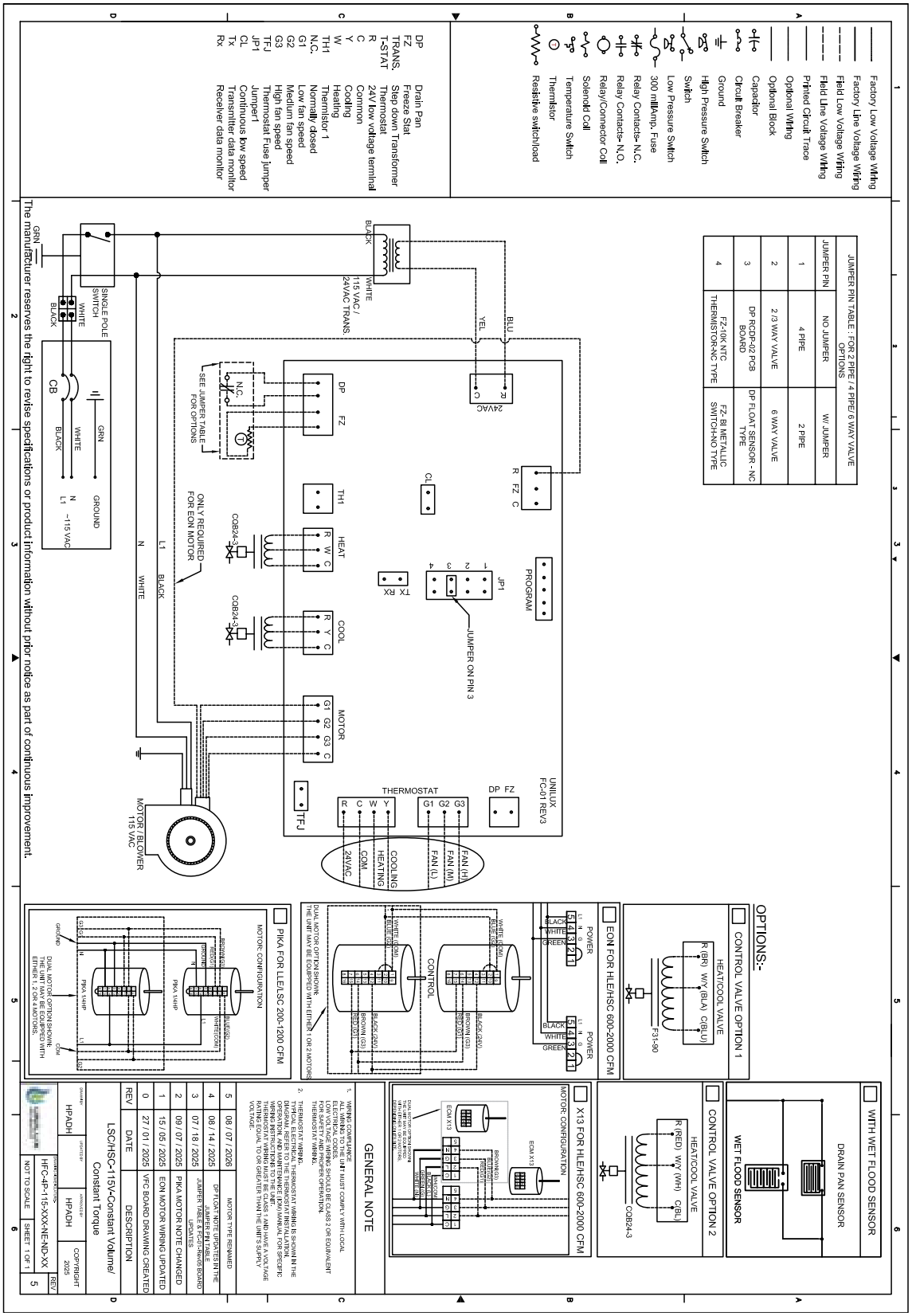
- All specified clearances are maintained for performance, installation, and servicing.
- Adequate space is available for any required valve packages.
- The unit remains accessible for regular inspection, maintenance, and repairs.

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Wiring Diagrams

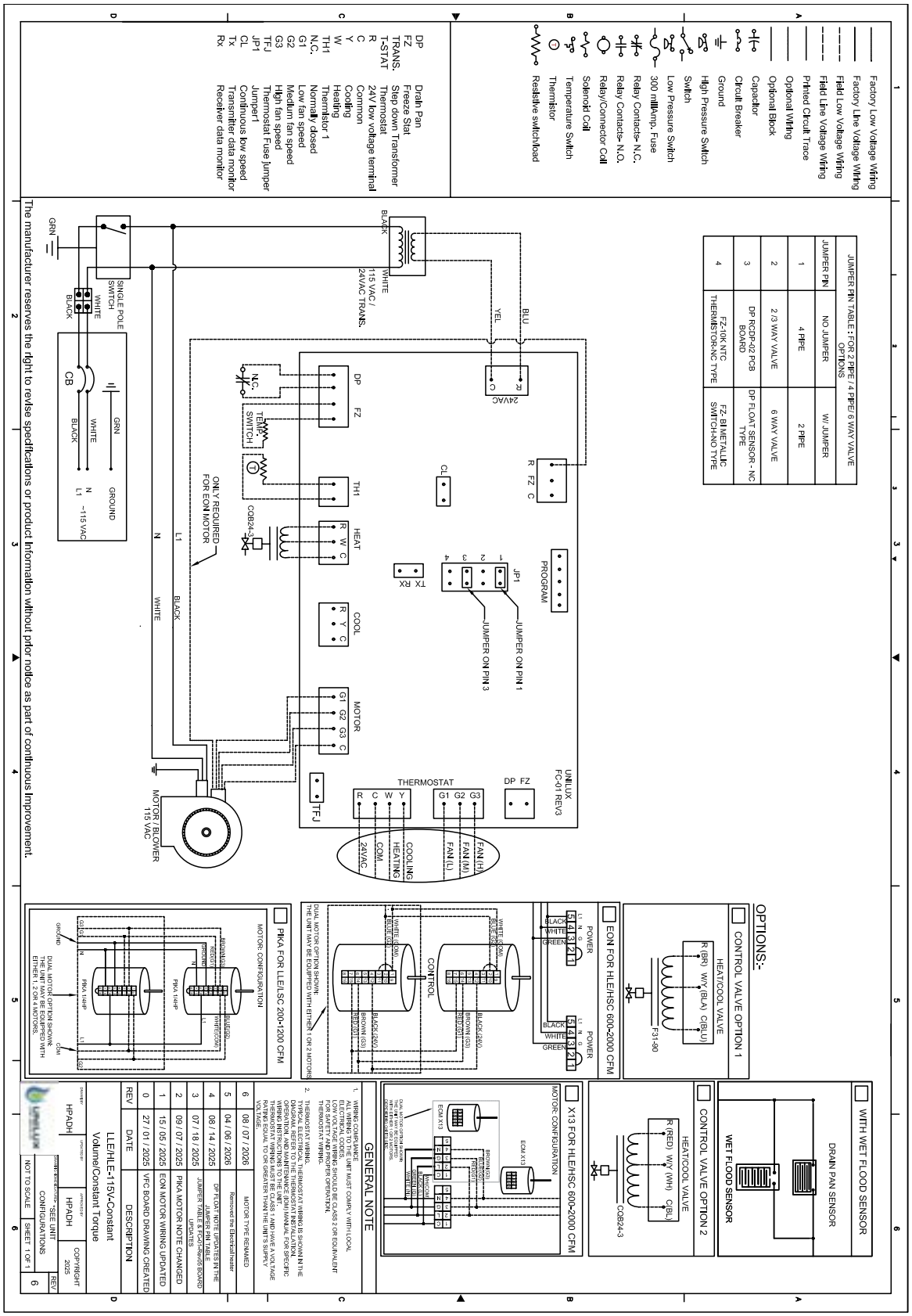
The example schematic below is LSC/ HSC - Constant Torque or Constant Volume

For job-specific schematics, please contact your sales representative.



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The example schematic below is LL/ LLE/ HL/ HLE - Constant Torque or Constant Volume
For job-specific schematics, please contact your sales representative.



General Operations

Sequence of Operations

Hydronic Only Horizontal Fan Coil Unit - 2 Pipe & 4 Pipe (Standard Thermostat)

Main Unit

- Disconnect Service switch is in the “off“ position: Complete system is off.
- Disconnect Service switch is in the “on“ position: Power is provided to the fan coil unit and the thermostat is energized. The main fan is initially off and only turns on call from the thermostat.

Supply Fan(s) Operation

LL, LLE, LSC, HL, HLE, HSC Model:

4 main fan speeds are available; Low, Medium, High fan speed along with Off. The main fan shall operate on call from the thermostat. When there is a call for heat or cool, the fan shall operate with a 3-speed sequence to satisfy the space temperature. The further away the room temperature is from the thermostat setpoint, the higher the fan speed operation. Please consult the thermostat specifications for details on deadbands and temperature ranges for each fan speed. When the thermostat fan option is manually set, the fan can be manually adjusted to high, medium, low speed or off.

Main Unit

LL, HL:

On a call for heating or cooling (during normal operation), the fan shall operate at the appropriate fan speed (refer to Supply Fan(s) Operation above). The motorized control valve actuator shall energize, opening the valve to allow water to pass through water coil.

When the room temperature meets the thermostat setpoint, the control valve actuator shall be de-energized and the valve will close preventing water from passing through the water coil.

LSC, HSC Models:

On a call for heating or cooling (during normal operation), the fan shall operate at the appropriate fan speed (refer to Supply Fan(s) Operation above).

For Heating, the corresponding hot water motorized control valve actuator shall energize, opening the valve to allow water to pass through the hot water coil. When the room temperature meets the thermostat setpoint, the hot water control valve actuator shall be de-energized and the valve shall close preventing water from passing through the hot water coil.

For Cooling, the corresponding chilled water motorized control valve actuator shall energize, opening the valve to allow water to pass through the chilled water coil. When the room temperature meets the thermostat setpoint, the chilled water control valve actuator shall be de-energized and the valve shall close preventing water from passing through the chilled water coil.

LLE, HLE Models:

On a call for heating or cooling (during normal operation), the fan shall operate at the appropriate fan speed (refer to Supply Fan(s) Operation above).

For Heating, there is a hot water temperature sensor (thermistor) installed on the supply riser stub entering the fan coil unit. If the sensor detects the incoming water temperature to be 85°F or above, on a call for heating from the thermostat the motorized control valve actuator will energize, opening the valve to allow water to pass through the water coil.

When the room temperature meets the thermostat setpoint, the water control valve actuator will be de-energized and the valve shall close preventing water from passing through the water coil. The auxiliary electric heater shall remain off.

If there is a call for heating from the thermostat and the hot water temperature sensor (thermistor) detects the incoming water temperature to be below 85°F at the end of 5-minute purge, then the motorized control valve shall remain closed and the auxiliary electric heater will activate. When the room temperature meets the thermostat setpoint, the auxiliary electric heater shall be de-energized.

For Cooling, there is an incoming water temperature sensor (thermistor) installed on the supply riser stub entering the fan coil unit. If the sensor detects the temperature to be 65°F or below, on a call for cooling from the thermostat the motorized control valve actuator shall energize, opening the valve to allow water to pass through that water coil.

When the room temperature meets the thermostat setpoint, the chilled water control valve actuator shall be de-energized and the valve shall close preventing water from passing through the chilled water coil.

If there is a call for cooling by the thermostat and the chilled water temperature sensor (thermistor) detects a temperature above 65°F, then the chilled water control valve actuator shall remain de-energized and the valve shall remain closed to the water coil.

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Safety Devices

Drain Pan Overflow Switch:

This device is standard in all fan coil units. If the drain pan is blocked and the drain pan overflow sensor is activated, the unit will stop its normal operation. Once the blockage in the drain pan is cleared and the drain pan overflow sensor is deactivated, normal operational sequence will resume.

Low Limit Temperature Sensor (Freezestat):

This device is standard in all fan coil units. The freezestat is installed on the entering air side of the water coil. If the freezestat senses less than 40°F temperature, the system de-energizes main fan and energizes all water valve actuators (hot and chilled) to allow water to flow through the water coil(s). The fan coil unit resumes normal operation once the freeze protection sensor reaches 50°F.

Important Note: This is a temporary safety measure. Should the water coil be exposed to freezing temperatures for long periods of time, the coil and the corresponding water components could become damaged causing water leakage.

Fan Operation

Automatic Mode (Fan Speed Determined by Thermostat)

In Automatic mode the fan speed may be determined by the difference between set temperature (thermostat dependant) and room temperature.

Manual Fan Control

Manual fan control is activated in a single fan speed thermostat. Connect the G terminal on the thermostat to the G3 on the fan coil control board.

Speed Taps Control (Default)

Low, Medium, and High-speed taps from motor are connected to Low, Medium, and High-speed connector on the control board to control fans speed with +24VAC signal.

Water Supply Valve Operation

Water supply valve operation is based on sequence of operation mentioned above for heat/cool.

Controls:

3-Wire: Common and 24VAC is always active, separate control signal activate 24VAC at the time of heat/cool call.

Optional Thermostat

Standard heat and cool call thermostat: in this type of thermostat connect heat call wire to W and cool call wire to Y (factory default).

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Maintenance Support

Important Information - Read Before Performing Any Maintenance

General Work Area

Properly maintain your Ceiling Mount fan coil for long lasting comfort and to minimize potential performance issues.

Owners may perform basic maintenance; however, we strongly recommend that fan coils are professionally maintained twice per year. Contact Unilux VFC Parts & Service for our full line of service.

Drain Pan

Vacuum the pan to remove all debris. Check the pan for leaks and test the drain. Pour a cup of water into it. If it drains quickly, this is normal. If it doesn't drain, snake the drain with a flexible tool.

Hydronic Coil

Inspect and vacuum the coil at the start and end of heating season when the coil is dry. Vacuuming the coil clears dirt and debris, which improves indoor air quality, heat transfer, and helps prevent the drain pan from clogging.

Copper & Stainless-Steel Tubing & Hoses

Inspect copper tubing and hose connections to the risers. Fix any water trickle immediately.

Motorized Valves

Inspect motorized valves to ensure proper operation. Ensure you have clean running water passing through the unit.

Motors & Blowers

Inspect the main supply air fan to ensure proper operation. Clean the blower during inspection to remove dust and dirt. This helps prevent the wheel from becoming unbalanced. Do not dislodge the balancing weights on the wheel while cleaning.

Insulation

Inspect the insulation on the walls of the unit for wear and tear.

Filter Replacement Type and Schedule

Return air filters trap dust, dirt, and pet dander from entering your fan coil. Changing filters improves indoor air quality and helps maintain your unit.

Open your access panel, slide up and into bracket or from side. Replace it with a new Unilux filter. To browse and order air filters for your Unilux HFC, check out www.uniluxdirect.com. The throwaway or replaceable filter is commonly used on Unilux fan coil units.

Filter must be cleaned or changed a minimum of four times a year. Under certain operating conditions, it may be necessary to change or clean the filters more frequently to obtain maximum unit performance.

The time interval between each replacement should be established based on regular inspection of the filter and should be recorded in the log for each unit. Dirty filters are the cause of the most common system performance complaints. It is essential that filters be serviced on a regular basis.



The units should not be operated at any time without complete enclosure, and filter in place. Operation in any other condition could result in motor overloading or burnout, clogging of coil surface, fan blade damage, or all of the above.

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Warranty Information

Warranty

Standard warranty includes part coverage for 2 years after start-up by an authorized Unilux technician.

The warranty will be void if any of the following occur:

- Installation instructions are not properly followed.
- The unit is operated during construction.
- The fan coil is not regularly cleaned.
- The unit is used inappropriately or negligently.
- Unauthorized modifications are made to the product, either before or after installation.
- The unit is inaccessible for cleaning or maintenance.

Parts, Service & Upgrades

Our full-service Parts & Service Department is available to help you with any maintenance questions or concerns.

Please contact them for service inquiries or replacement parts and accessory services.

Check out our online parts store to find new air filters, access panels, thermostats and more.

Visit:
www.uniluxhvac.com
info@uniluxhvac.com
1-800-397-3680

Disclaimer



Refer to the controls manufacturer's documentation for the accurate sequence of operation. Unilux HVAC is not responsible for third-party control sequences.

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Warranty Information

Unilux HVAC warrants that its products are free from defects in parts and factory workmanship for a period of 24 months from start-up date. Start-up must be performed by a Unilux authorized technician. Products or consumable components such as air filters are not covered. Components manufactured by third parties bear the warranty of their manufacturer.

The details of the warranty are as following:

(A) In the event that a part is deemed defective, the user must immediately inform Unilux HVAC in writing who will at its option furnish new or factory re-manufactured part at no cost to the user ex-factory. The user must return the defective part to Unilux HVAC within 30 days upon receipt of the replacement for evaluation.

(B) The warranty does not cover any costs of troubleshooting, shipment, installation or maintenance. The warranty also does not apply to the following situations: any damage or defect due to mishandling; improper storage; misuse; installation, commissioning, operation and maintenance contrary to Unilux HVAC's drawing, descriptive manual or recommendation; wrong supply of electricity, water or drain; improper repair; tamper or alteration; negligence; accident; normal wear; or any cause beyond the control of Unilux HVAC.

(C) The original warranty period does not change in the event of part replacement from Unilux HVAC.

(D) The warranty is issued exclusively to the original end-user of record at the time of manufacture and is not transferable.

(E) The provisions of the foregoing warranty are in lieu of any other warranty, whether express or implied, written or oral (including any warranty of merchantability or fitness for a particular purpose or of title or non-infringement). Unilux HVAC's liability arising out of the manufacturer, sale, or supplying of the products or their use or disposition, whether based upon warranty, contract, tort, or otherwise, shall not exceed the actual purchase price paid by the distributor for the product(s). In no event shall Unilux HVAC be liable to the distributor or any other person or entity for special, incidental, consequential or punitive damages (including, but not limited to loss of profits, loss of data, or loss of use damages) arising out of the manufacture, sale, or supplying of the products, even if Unilux HVAC has been advised of the possibility of such damages or losses.

Product Line: _____ User Name: _____

Model Number: _____ User Address: _____

Serial Number: _____ _____

Shipping Date: _____

Warranty Expiry Date: _____ Fax Number: _____

Please complete the above information, along with copy of site-completed Commissioning Checklist and return to:

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