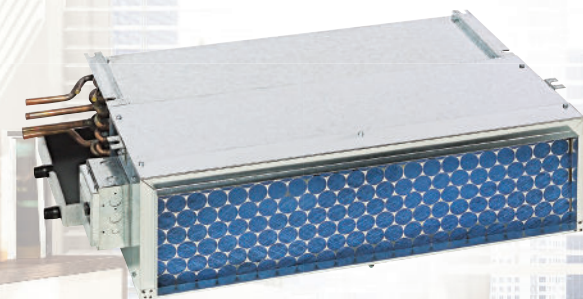
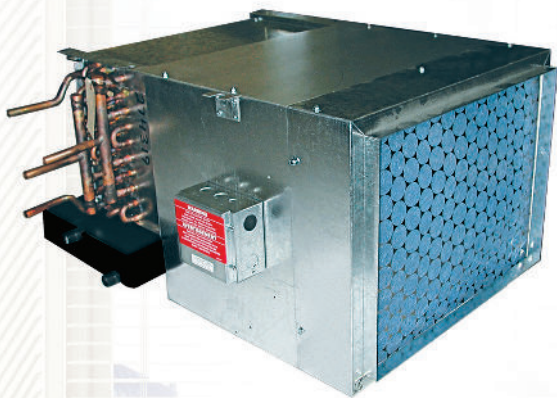


 **WILLIAMS™**

HORIZONTAL FAN COILS
200 - 1,200 CFM

HIGH PERFORMANCE HORIZONTAL
FAN COILS
600 - 2,200 CFM



ADVANCED
HYDRONICS



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FAN COIL CERTIFICATIONS



ETL LISTED

Williams horizontal fan coils are listed by Intertek (ETL). The ETL listing ensures that Williams horizontal have been examined by ETL and comply with the organization's applicable standards. ETL's re-examination service includes periodic visits by ETL inspectors to Williams' factory to ensure continued compliance for all listed products. Materials and equipment acceptance for use by the New York Department of Buildings: AH 008-120 / MEA 414-05-E



AHRI CERTIFIED

Williams horizontal fan coils are labeled and approved by the Air Conditioning, Heating & Refrigeration Institute (AHRI). This designation signifies that Williams horizontal fan coil units have been rated as follows in accordance with the latest edition of ANSI / AHRI 440 with Addendum 1 Performance Rating of room fan coils and subject to rating accuracy by AHRI sponsored, independent, third-party testing.



ALS-TRUESDAIL CERTIFICATION MARK FOR DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS

Certified Product and/or packaging, and/or documentation certified to both NSF / ANSI 61 and NSF/ANSI 372 by Truesdail shall bear this Certification mark to identify the compliance.

MORE THAN JUST FAN COILS

For over 100 years, Williams has been a market leader in providing high quality HVAC products for residential and commercial buildings. Today, Williams continues the proud tradition by offering to the commercial/industrial market more configurations and size options of quality fan coils and blower coils/air handlers than any other HVAC company in North America.

Williams is based in Colton California, serving all US and overseas markets with complete application engineering, sales, marketing and administrative services.

Our pledge is to provide complete, high quality and timely support for the successful completion of your construction projects involving engineered products offered by Williams. We believe in a partnering attitude that creates superior projects and high levels of satisfaction.

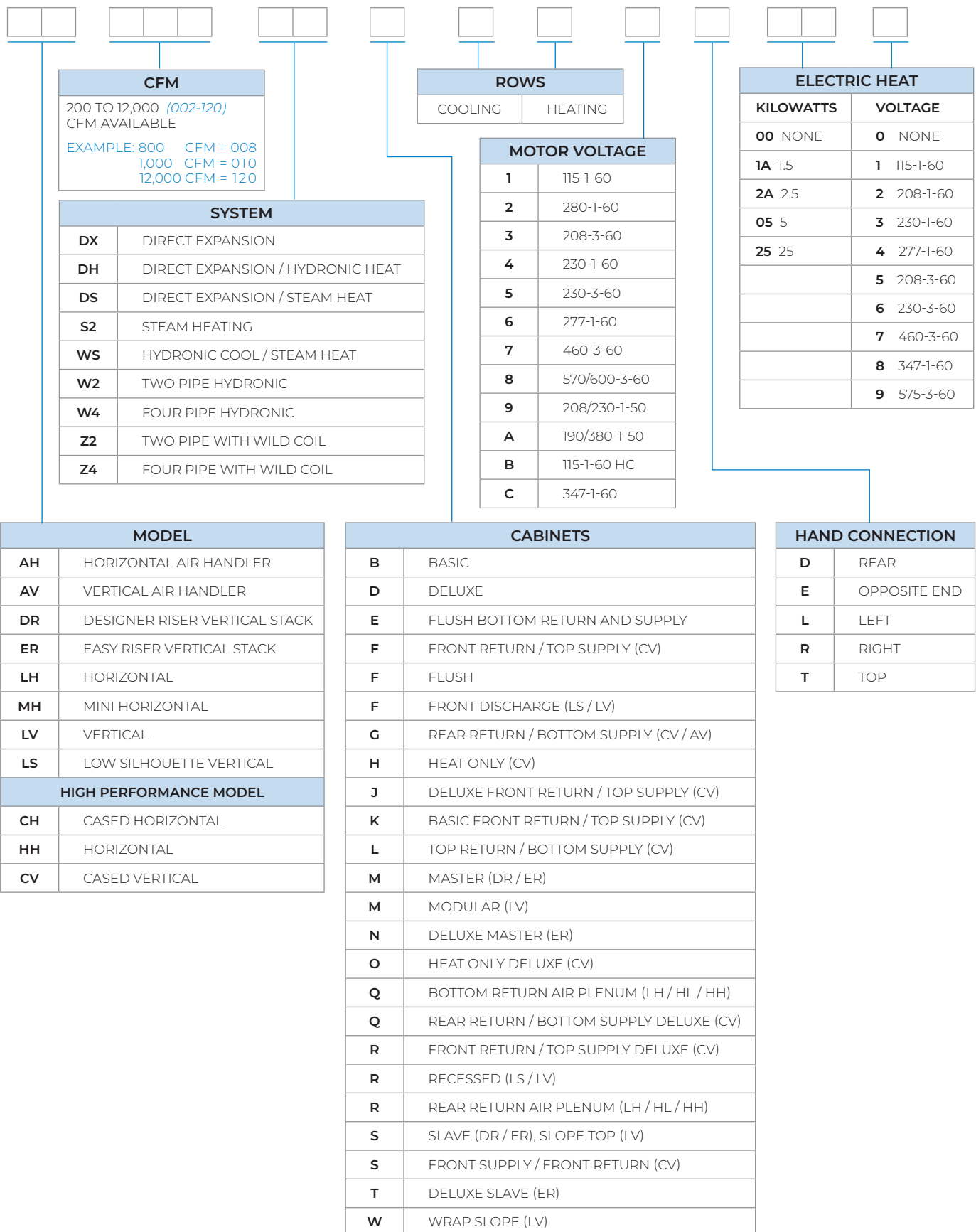


COLTON, CALIFORNIA

FAN COIL ASSEMBLY

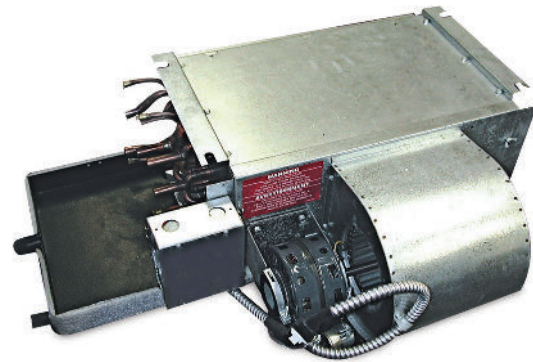
AIR HANDLER ASSEMBLY

WILLIAMS FAN COIL AND AIR HANDLERS MODEL IDENTIFICATION SYSTEM



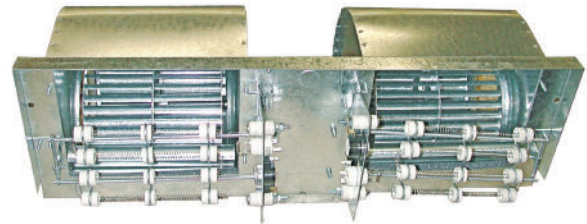
STANDARD FEATURES

- Heavy gauge galvanized steel cabinet with neoprene coated 1/2" thick fiberglass insulation with 3.35 PCF density.
- Coils are made of 1/2" OD copper tube with aluminum fins (12 FPI) equipped with manual air vent DX and steam coils do not include manual air vent. Coils are 100% underwater pressure tested at 350 PSI with a 300 PSI working pressure.
- Galvanized drain pan is powder coated epoxy and subjected to a 650 hour salt spray test in accordance test in accordance with ASTM-B117. Also comes with 1/8" thick closed cell insulation and primary and secondary drain connections.
- Three-speed, 115/1/60 PSC motor with quick connect plug.
- Controls and motors are factory wired and terminated in a junction box for single point power supply.
- One inch, reinforced duct collar on return and supply air openings.
- Swing down, hinged return air grille/access door on Deluxe and Flush models.
- Deluxe unit has single deflection supply air grille.
- One inch fiberglass, throwaway filter, except Horizontal Basic.
- Individually tagged, crated and shipped as scheduled for installation.
- ETL approved, AHRI certified.
- 100% factory tested.



OPTIONS

- Soft white, powder coated epoxy cabinet that's subjected to a 1500 hour salt spray test in accordance with ASTM-B117.
- Drain Pans - stainless steel.
- Insulation fiberglass, foil face, elastomeric and double wall separate foam insulation.
- Coils - custom tubes, phenolic coated, stainless steel end plates. All options are available on one to six rows.
- Three speed, 208-230/1/50-60 or 277/1/60 PSC motor with quick connect plug.
- Systems - two or four pipe, hydronic cooling/heating, steam, direct expansion (DX) and/or electric heat. Steam heat. DX coating.
- Cabinet - Deluxe, Flush and for a premium custom colors.
- ECM™ motors; programmed 3 speed, or variable volume, 120-240/1/60 or 277 /1/60.
- Controls - wide selection of factory mounted valves and controls.
- Filters - two inch thick throwaway, washable and pleated.
- Flow control circulator for water heating custom applications.
- Grilles available as double deflection and in custom colors.
- Electric Strip Heat from 0.5 to 5 kW.



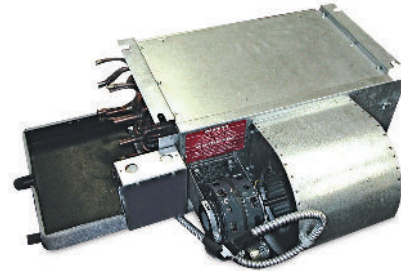
HORIZONTAL FAN COILS

LH / LH SERIES

200 - 1,200 CFM

HORIZONTAL BASIC / LH-B

The low profile and flexible design of the Horizontal Basic fan coil (LH-B/low static and HL-B/high static) is ideal for multiple applications. The slim, compact design is well suited for drop-ceiling, closet, hallway and other concealed applications. The Horizontal Basic comes with a powder coated epoxy drain pan and a wide range of coil, motor and controls options. These models have no exterior cabinet



HORIZONTAL WITH RETURN AIR PLENUM / LH-R

The Horizontal with Return Air Plenum (LH-R/low static and HL-R/high static) is our basic model with a galvanized rear return air plenum. Ideal for mounting above ceilings, in closets, hallways and bathroom areas, the plenum conceals the unit's blower motor which is easily accessible for service by removing the bottom panel. Available as a rear return CH-R or bottom return LH-Q. Comes with throwaway filter.



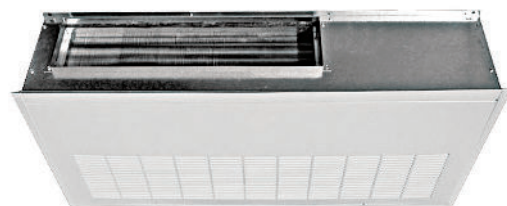
HORIZONTAL DELUXE / LH-D

The Horizontal Deluxe fan coil (LH-D/low static and HL-D/high static) is designed for horizontal exposed ceiling mounted applications. The Horizontal Deluxe is our basic unit housed in a cabinet intended for "free blow" exposed ceiling mounting. Ideal for remodel situations where adding AC ductwork is limited. Deluxe cabinets are constructed of cold rolled steel and finished with 385° baked on tough, soft white epoxy powder coated finish.



HORIZONTAL FLUSH / LH-F

The Horizontal Flush (LH-F/low static and HL-F/high static) is a recessed fan coil designed for flush ceiling applications. This unit is designed to accommodate ducted supply air. The telescoping frame and hinged access panel of the Horizontal Flush give it the flexibility to accommodate any type of ceiling. Same attractive, durable powder coated access panel as the Horizontal Deluxe.



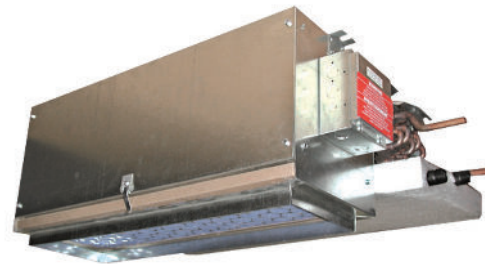
HORIZONTAL DELUXE BOTTOM SUPPLY & RETURN LH-E

The Horizontal Flush Bottom Supply and Return (LH-E/low static and HL-E/high static) is a recessed fan coil designed for flush ceiling applications. The telescoping frame and hinged access panel of the Horizontal Flush Bottom Supply and Return allow it to fit any type of ceiling. The unit comes in the same attractive, durable powder coated cabinet as the Horizontal Deluxe.



HORIZONTAL WITH BOTTOM RETURN AIR PLENUM / LH-Q

The Horizontal with Bottom Return-Air Plenum (LH-Q) is a low-static (up to .25 ESP) fan coil that comes with a coil, blower/motor assembly with quick-connect plug and a galvanized steel, powder-coated epoxy drain pan covered with 1/8-inch thick insulation. The galvanized steel plenum is insulated with 1/2-inch thick, over three pound density, neoprene-coated fiberglass. The plenum conceals the fan and motor assembly that is easily accessed for service by removing the back panel. This unit is easily mounted above ceilings, in closets, and in hallways.



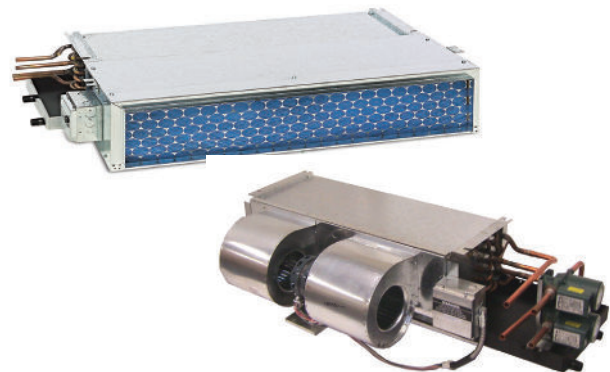
LOW PROFILE HORIZONTAL

This basic low-static with ultra low profile horizontal (LH-X) is ideal for multiple applications. It's slim, compact design is well suited for drop ceiling, closet, hallway and other concealed applications where our horizontal basic (LH-B) dimensions are not adequate. These fan coils come with a powder coated epoxy drain pan with a wide range of coil, motor and controls options.



LOW PROFILE HORIZONTAL (LH-X) with RETURN AIR PLENUM / LH-Y

The LP-X horizontal fan coil with return air plenum (LH-Y) is our basic LH-X with a galvanized rear return air plenum, ideal for mounting above ceilings, in closets, hallways and bathroom areas, the plenum conceals the unit's blower motor which is easily accessible for service by removing the bottom panel. Rear air plenum units come with throwaway filter.



AHRI CERTIFIED COOLING CAPACITY

LH / LH SERIES



Williams Horizontal Fan Coils are labeled and approved by the Air Conditioning, Heating & Refrigeration Institute (AHRI). This designation signifies that Williams Horizontal Fan Coils units have been rated as follows in accordance with the latest edition of ANSI/AHRI 440 with Addendum 1 Performance Rating of Room Fan Coils and subject to rating accuracy by AHRI sponsored, independent, third-party testing.

MODEL / SIZE	MOTOR / TYPE	STYLE	AHRI APPROVED STANDARD RATINGS			COOLING CAPACITY		POWER INPUT (WATTS)
			RATED CFM	GPM	WPD (FT/H2O)	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	
002	LH / LP-H series (standard)	B	260	1.1	0.5	5,530	5,040	106
		R, Q	240	1.0	0.5	5,240	4,720	102
		D, E, F	200	0.9	0.4	4,650	4,080	98
003	LH / LP-H series (standard)	B	340	1.3	0.7	6,680	6,240	113
		R, Q	310	1.3	0.6	6,250	5,800	105
		D, E, F	275	1.1	0.6	5,750	5,280	104
	LH / LP-H series (standard)	B	340	1.3	1.1	6,680	6,240	118
		R, Q	320	1.3	1.0	6,390	5,950	106
		D, E, F	290	1.2	0.9	5,960	5,510	101
004	LH / LP-H series (standard)	B	420	2.0	1.3	9,920	8,530	148
		R, Q	410	2.0	1.3	9,760	8,370	141
		D, E, F	380	1.9	1.2	9,280	7,900	134
	LH / LP-H series (standard)	B	515	2.3	1.6	11,470	10,030	178
		R, Q	480	2.2	1.5	10,900	9,480	174
		D, E, F	455	2.1	1.4	10,500	9,080	172
006	LH / LP-H series (standard)	B	650	3.3	3.1	16,510	12,070	182
		R, Q	580	3.0	2.7	15,200	11,820	173
		D, E, F	510	2.8	2.3	13,890	11,560	148
	LH / LP-H series (standard)	B	665	3.4	3.2	16,790	14,340	216
		R, Q	630	3.2	3.0	16,140	13,720	210
		D, E, F	590	3.1	2.7	15,390	13,000	208
008	LH / LP-H series (standard)	B	900	4.5	2.2	22,640	19,350	273
		R, Q	870	4.1	2.1	22,130	18,440	258
		D, E, F	830	4.3	2.0	21,450	18,160	227
	LH / LP-H series (standard)	B	915	4.6	6.6	22,900	19,610	388
		R, Q	880	4.5	6.3	22,300	19,010	378
		D, E, F	840	4.3	6.0	21,620	18,330	366
010	LH / LP-H series (standard)	B	1,040	5.6	3.4	28,130	23,220	281
		R, Q	1,010	5.5	3.3	27,610	22,700	273
		D, E, F	980	5.4	3.2	27,070	22,170	248
	LH / LP-H series (standard)	B	1,080	5.8	3.5	28,830	23,910	475
		R, Q	1,030	5.6	3.3	27,960	23,050	467
		D, E, F	1,000	5.5	3.2	27,430	22,530	456
012	LH / LP-H series (standard)	B	1,240	7.0	5.1	35,210	26,350	313
		R, Q	1,200	6.9	5.0	34,500	27,650	297
		D, E, F	1,140	6.7	4.7	33,390	26,580	286
	LH / LP-H series (standard)	B	1,255	7.1	5.2	35,480	28,610	476
		R, Q	1,150	6.7	4.8	33,600	26,770	470
		D, E, F	1,100	6.5	4.5	32,520	25,790	460

Notes: 1) Based on 80°F DB and 67°F WB EAT, 45°F EWT, 10°F temperature rise, high fan speed. Motor voltage 115/1/60 power source. Air flow under dry coil conditions. Water pressure drops shown in feet of water. All units are listed under UL Category Control No. LZFE.

2) Ratings are based on actual CFM. Standard coils for 002-004 is 3 rows and 006-012 is 4 rows.

3) Legend - B = Basic; R = Rear return-air plenum; Q = Bottom return-air plenum; D = Deluxe; E = Deluxe bottom supply and bottom return and F = Flush.

HEATING PERFORMANCE

LH / LH SERIES

HEATING PERFORMANCE						
SIZE	SERIES / MOTOR TYPE	COIL ROWS/ (FPI)	RATED CFM	MBH	GPM	WPD (FT/H ₂ O)
002	LH series (standard)	1 Row (12)	245	9.2	0.5	0.3
		2 Rows (12)	245	16.4	0.8	1.2
003	LH series (standard)	1 Row (12)	365	11.5	0.6	0.4
		2 Rows (12)	365	21.6	1.1	1.7
	LH series (high static)	1 Row (12)	320	10.8	0.5	0.3
		2 Rows (12)	320	19.8	1	1.5
004	LH series (standard)	1 Row (12)	435	15.4	0.8	0.6
		2 Rows (12)	435	27	1.4	2.7
	LH series (high static)	1 Row (12)	480	5	0.8	0.7
		2 Rows (12)	480	16.2	1.5	3
006	LH series (standard)	1 Row (12)	710	29.3	1.2	1.2
		2 Rows (12)	710	23.5	1.9	1.0
	LH series (high static)	1 Row (12)	630	38.9	1.1	1.1
		2 Rows (12)	630	22.0	1.9	5.1
008	LH series (standard)	1 Row (12)	925	38.9	1.5	2.0
		2 Rows (12)	925	29.8	2.5	1.6
	LH series (high static)	1 Row (12)	870	49.6	1.4	1.9
		2 Rows (12)	870	28.9	2.4	1.5
010	LH series (standard)	1 Row (12)	1,080	47.8	1.8	3.0
		2 Rows (12)	1,080	36.1	3.0	2.3
	LH series (high static)	1 Row (12)	1,030	59.6	1.8	2.9
		2 Rows (12)	1,030	35.3	2.9	2.2
012	LH series (standard)	1 Row (12)	1,290	57.9	2.2	4.4
		2 Rows (12)	1,290	43.7	3.6	3.3
	LH series (high static)	1 Row (12)	1,230	71.7	2.1	4.3
		2 Rows (12)	1,230	42.6	3.5	3.2

Notes: Based on 70°F DB EAT, 180°F EWT, Delta T = 20, high fan speed. Motor voltage 115/1/60 power source. Air flow under dry coil conditions. Water pressure drops shown in feet of water.

COIL DATA

Coils are made from ½" O.D. copper tubing with .016" wall thickness, and tubes are staggered for maximum heat transfer. A manual air vent is standard on all hydronic coils. DX and steam coils do not include manual air vent. All coils are 100% underwater pressure tested to 350 PSIG with a 300 PSIG max working pressure. Steam coils are rated for up to 15 PSIG or 250°F.

Coils are available in two or four pipe, and from one to six row configurations for ER & DR Series units with any combination of chilled or hot water, steam or direct expansion. Custom circuiting is available.

COIL DATA

LH / LH SERIES

COIL ROW	002	003	004	006	008	010	012
Single-Row Coil							
Two-Row Coil							
Three-Row Coil				STANDARD			
Four-Row Coil							
Five-Row Coil							
*Six-Row Coil				OPTIONAL			

* Six-row coil maximum when selecting a DX coil with a hot water coil.

COIL OPTIONS:

- DX – Includes distributor and nozzle, TXV must be field furnished and installed
- Steam – 1-15 PSIG
- Preheat Coil Position – Standard coil is reheat position
- Phenolic Anti-Corrosion Coating (PAC) · Stainless Steel Tubes/Fins/End Plates
- Custom/Tubes
- 10 - 16 fins per inch (standard is 12 FPI)

Coil connections on the chilled water side are ½" on the 003-012. The hot water connection is also ½" on the 003-012.



ELECTRIC HEAT

LH / LH SERIES

Electric heat may be furnished with either hydronic, direct expansion or steam coils and is factory mounted, wired, and tested. Option equipped with low watt density (for long life) nichrome wire elements. The heater has a built-in, high limit, and fusible link to provide maximum safety. Can only be installed in preheat position.

MODEL / SIZE	kW	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	VOLTAGE	AMPS									
002 (low static only)	115	4.4	8.7	13.0	17.4						
	208	2.4	4.8	7.2	9.6	12.0					
	230	2.2	4.4	6.5	8.7	10.9					
	277	1.8	3.6	5.4	7.2	9.0					
003	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1
004	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1
006	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1
008	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1
010	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1
012	115	4.4	8.7	13.0	17.4	21.7	26.1				
	208	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0
	230	2.2	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7
	277	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1

AIR FLOW DATA

LH / LH SERIES

Air flow shown below is under dry coil conditions.

AIR FLOW DATA		EXTERNAL STATIC PRESSURE																	
SIZE	COIL ROWS	0.00			0.05			0.10			0.15			0.20			0.25		
		HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW
002 Free Return	3 Row	255	230	175	242	218	163	223	200	148	200	177	130	170	150	106	140	115	79
	4 Row	245	220	165	232	208	153	213	190	138	190	167	120	160	140	96	130	105	69
002 w/Plenum	3 Row	255	230	175	242	218	163	223	200	148	200	177	130	170	150	106	140	115	79
	4 Row	246	220	165	232	208	153	213	190	138	190	167	120	160	140	96	130	105	69
003 Free Return	3 Row	365	305	207	340	285	189	310	262	165	275	235	138	235	200	110	180	149	80
	4 Row	355	295	197	330	275	179	390	252	155	265	225	128	225	190	100	170	139	70
003 w/Plenum	3 Row	310	255	167	285	235	149	255	212	125	220	185	98	180	150	70	125	99	40
	4 Row	300	245	157	275	225	139	245	202	115	210	175	88	170	140	60	115	89	30
004 Free Return	3 Row	460	400	315	440	380	295	414	358	270	389	328	245	360	310	220	338	200	197
	4 Row	450	390	305	430	370	285	404	348	260	379	318	235	345	300	210	327	280	186
004 w/Plenum	3 Row	435	370	285	415	350	265	389	328	240	364	303	215	337	280	190	312	260	190
	4 Row	425	360	275	405	340	255	379	318	230	354	293	205	329	270	180	303	250	157
006 Free Return	3 Row	725	525	455	665	495	425	605	463	400	545	425	370	487	395	340	427	356	310
	4 Row	710	510	440	650	480	410	590	448	385	530	410	355	472	380	325	413	341	295
006 w/Plenum	3 Row	695	485	400	635	455	370	575	423	345	515	385	315	457	355	285	398	316	255
	4 Row	680	470	385	620	440	355	560	408	330	500	370	300	442	340	270	382	301	240
008 Free Return	3 Row	945	810	700	920	775	670	890	740	638	850	710	599	805	670	560	760	630	518
	4 Row	925	790	680	900	755	650	870	720	618	830	690	579	785	650	540	740	610	498
008 w/Plenum	3 Row	890	745	620	865	710	590	835	675	558	795	645	519	750	605	480	705	565	438
	4 Row	870	725	600	845	690	570	815	655	528	775	625	499	730	585	460	685	545	418
010 Free Return	3 Row	1100	940	660	1080	820	645	1050	900	630	1025	880	615	995	860	599	962	830	570
	4 Row	1080	920	640	1060	900	625	1030	880	610	1005	860	595	975	840	579	942	810	550
010 w/Plenum	3 Row	1030	900	630	1010	880	615	980	860	600	955	840	585	925	820	569	892	790	540
	4 Row	1010	880	610	990	860	595	960	840	580	935	820	565	905	800	549	872	770	520
012 Free Return	3 Row	1308	1100	940	1260	1060	920	1214	1020	900	1168	979	864	1130	930	830	1092	885	785
	4 Row	1288	1080	920	1240	1040	900	1194	1000	880	1148	959	845	1110	910	810	1072	865	765
012 w/Plenum	3 Row	1208	1020	900	1160	980	880	1114	940	860	1068	899	825	1030	850	790	992	805	745
	4 Row	1188	1000	88	1140	960	860	1094	920	840	1048	879	805	1010	830	770	972	785	725
003	3 Row	320	310	305	290	285	270	260	250	225	200	190	180	170	155	150	150	135	125
	4 Row	315	305	300	285	280	265	255	245	220	195	185	175	165	160	145	145	130	120
004	3 Row	480	425	330	455	405	310	430	380	290	410	355	270	390	330	249	370	310	225
	4 Row	470	415	320	445	395	300	420	370	280	400	345	260	380	320	239	360	300	215
006	3 Row	630	500	380	595	484	365	565	468	345	540	450	325	520	430	310	500	400	290
	4 Row	620	490	370	585	474	355	555	458	335	530	440	315	510	420	300	490	390	280
008	3 Row	870	800	530	842	775	490	817	750	450	795	725	420	765	700	390	735	670	365
	4 Row	860	790	520	832	765	480	807	740	440	785	715	410	755	690	380	725	660	355
010	3 Row	1030	920	510	1000	890	480	960	860	445	930	830	415	900	800	380	880	775	350
	4 Row	1015	905	495	985	875	465	945	845	430	915	815	400	885	785	365	865	760	335
012	3 Row	1120	1010	570	1090	980	540	1060	950	505	1030	915	475	990	880	445	955	845	420
	4 Row	1105	995	555	1075	965	525	1045	935	490	1015	900	460	975	865	430	940	830	405

Notes: Ratings and capacity tables based on nominal CFM.

MOTOR DATA

LH / LH SERIES

Motors are wired to a junction box ready for single-point field connection.

OUTSTANDING MOTOR FEATURES:

- Quick connect plug
- Permanent split capacitor
- Thermal overload protection
- 1050 RPM for lower operating costs
- Oversized bearings, permanently lubricated and sealed
- 122°F maximum operating temperature
- Custom motor mounts designed to reduce noise and eliminate vibration
- Stators are epoxy dipped for more efficient motor cooling

OPTIONAL MOTORS:

- 208V-1Ø-60 motors
- 277V-1Ø-60 motors
- 230/220V-1Ø-60 motors
- 50-Hz motors in specified voltages

60 HERTZ SINGLE-PHASE MOTORS (1100 RPM)			VOLTAGE / WATTS							
			115V		208V		230V		277V	
SIZE	HP (QTY)	BLOWERS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
002	1/20 (1)	1	0.78	98	0.66	98	0.45	98	0.40	98
	1/20 (1)	1	1.00	104	0.66	104	0.55	104	0.50	104
003	1/10 (1)	2	1.30	116	0.77	116	0.70	118	0.60	116
	1/15 (1)	2	1.00	134	0.55	134	0.55	134	0.50	134
004	1/8 (1)	2	2.00	170	1.21	170	1.10	170	0.84	170
006	1/15 (1)	2	1.20	141	0.55	141	0.65	141	0.60	141
	1/8 (1)	2	2.00	201	1.32	201	1.20	201	0.90	201
008	1/4 (1)	2	2.30	215	1.45	215	1.20	215	1.00	215
	1/4 (1)	2	3.20	372	1.87	372	1.70	372	1.40	372
010	1/4 (1)	2	2.50	231	1.78	231	1.30	231	1.10	231
	1/4 (1)	2	3.80	430	2.18	430	1.98	430	1.60	430
012	1/4 (1)	2	3.00	249	2.10	249	1.60	249	1.30	249
	1/4 (1)	2	4.00	450	2.30	450	1.60	450	1.70	450

Notes: Motor full load amps listed refer to NEC amps. Actual motor nameplate amps may vary.

SOUND DATA

LH / LH SERIES

SIZE	FAN SPEED	OCTAVE BAND						
		2	3	4	5	6	7	8
		CENTER FREQUENCY (CPS)						
		125	250	500	1000	2000	4000	8000
002	High	45.0	45.3	42.0	38.7	31.5	29.5	26.0
	Medium	43.0	44.0	39.5	36.0	29.5	25.0	22.5
	Low	40.5	41.0	36.5	29.0	24.5	23.0	19.5
003	High	48.0	48.5	46.0	43.0	37.0	32.0	28.0
	Medium	46.0	47.0	44.0	41.0	34.0	29.5	25.5
	Low	41.0	41.5	38.5	33.5	28.0	26.0	21.5
004	High	50.0	51.0	49.0	45.0	39.0	34.5	29.5
	Medium	48.0	49.5	46.5	42.5	36.5	31.0	27.0
	Low	42.5	43.0	40.0	36.5	32.3	27.0	23.0
006	High	51.0	52.0	49.5	44.5	38.5	33.0	29.0
	Medium	48.5	50.0	47.0	41.5	37.0	31.5	27.0
	Low	43.0	44.5	41.0	37.0	31.5	25.0	22.0
008	High	52.0	53.0	47.5	42.5	36.0	31.5	28.0
	Medium	50.5	50.0	46.5	40.0	35.5	29.0	25.0
	Low	44.5	45.0	41.0	36.5	27.5	25.0	21.0
010	High	51.0	52.5	48.0	42.5	36.5	33.0	29.5
	Medium	49.0	50.0	46.0	42.0	34.0	30.0	26.5
	Low	43.0	44.0	42.5	35.5	31.5	27.0	23.0
012	High	50.0	51.5	46.0	42.0	36.0	31.5	29.0
	Medium	48.0	49.5	44.0	40.0	33.5	29.0	26.0
	Low	42.5	43.5	39.0	34.5	29.5	26.0	22.5

- Notes:**
- 1) Power levels are in dB RE 10-12 watts.
 - 2) Sound data tested in accordance with ASHRAE Standard 68 and AHRI Standard 260 and 350.
 - 3) Ratings are based on actual CFM. Standard coils for 003-004 are 3 rows and 006-012 are 4 rows.
 - 4) Air Flow under dry coil conditions.

WEIGHTS & MEASURES

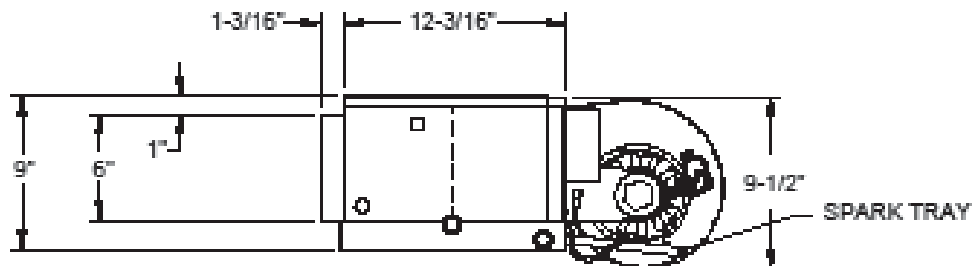
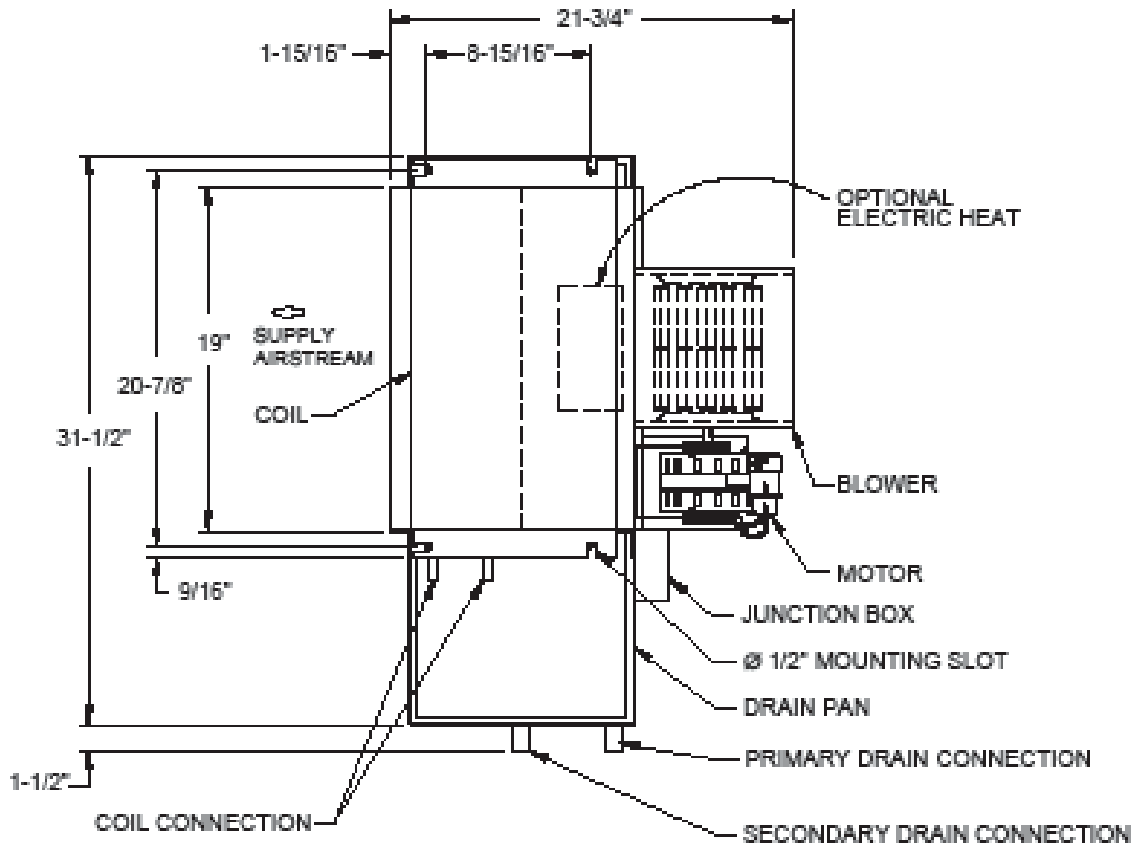
HORIZONTAL LH SERIES

The following LH Series weights and measures are based on fan coil units only. Add approximately 20% for packaging and crating.

UNIT	MODEL	ROWS	DIMENSIONS / INCHES			WEIGHT / LBS.		DIMENSIONS / MILLIMETERS			WEIGHT / KG	
			HEIGHT	WIDTH	DEPTH	DRY	WET	HEIGHT	WIDTH	DEPTH	DRY	WET
LH SERIES BASIC	002	3	10	32	22	75	79	254	813	559	34	36
	002	4	10	32	22	80	85	254	813	559	36	38
	003	3	10	32	22	75	79	254	813	559	34	36
	003	4	10	32	22	80	85	254	813	559	36	38
	004	3	10	32	22	90	96	254	813	559	41	43
	004	4	10	32	22	96	103	254	813	559	43	47
	006	3	10	38	22	111	117	254	965	559	50	53
	006	4	10	38	22	117	125	254	965	559	53	57
	008	3	11	38	23	124	130	280	965	584	56	59
	008	4	11	38	23	130	138	280	965	584	59	63
	010	3	11	50	23	144	151	280	1270	584	65	68
	010	4	11	50	23	150	159	280	1270	584	68	72
012	3	11	50	23	153	161	280	1270	584	69	73	
012	4	11	50	23	160	171	280	1270	584	73	78	
LH SERIES RETURN AIR PLENUM	002	3	11	32	26	95	99	280	813	661	43	45
	002	4	11	32	26	100	105	280	813	661	45	47
	003	3	11	32	26	95	99	280	813	661	43	45
	003	4	11	32	26	100	105	280	813	661	45	47
	004	3	11	32	26	120	136	280	813	661	54	57
	004	4	11	32	26	126	133	280	813	661	57	60
	006	3	11	38	26	131	137	280	965	661	59	62
	006	4	11	38	26	137	145	280	965	661	62	66
	008	3	13	38	27	144	150	280	965	686	65	68
	008	4	13	38	27	150	158	330	965	686	68	72
	010	3	13	50	27	164	171	330	1270	686	74	77
	010	4	13	50	27	170	179	330	1270	686	77	81
012	3	13	50	27	173	181	330	1270	686	78	82	
012	4	13	50	27	160	191	330	1270	686	82	87	
LH SERIES DELUXE	002	3	11	43	24	165	169	280	1092	610	75	76
	002	4	11	43	24	170	175	280	1092	610	77	79
	003	3	11	43	24	165	169	280	1092	610	75	76
	003	4	11	43	24	170	175	280	1092	610	77	79
	004	3	11	43	24	175	181	280	1092	610	79	82
	004	4	11	43	24	181	188	280	1092	610	82	85
	006	3	13	51	28	174	180	330	1346	711	79	82
	006	4	13	51	28	180	188	330	1346	711	82	85
	008	3	13	51	28	184	190	330	1346	711	83	86
	008	4	13	51	28	190	198	330	1346	711	86	90
	010	3	13	61	28	204	211	330	1549	711	92	96
	010	4	13	61	28	210	219	330	1549	711	95	99
012	3	13	61	28	213	221	330	1549	711	97	100	
012	4	13	61	28	220	231	330	1549	711	100	105	
LH SERIES FLUSH	002	3	11	48	28	106	110	279	1219	711	48	50
	002	4	11	48	28	111	116	279	1219	711	50	52
	003	3	11	48	28	106	110	279	1219	711	48	50
	003	4	11	48	28	111	116	279	1219	711	50	52
	004	3	11	48	28	149	155	279	1219	711	68	70
	004	4	11	48	28	155	162	279	1219	711	70	74
	006	3	12	56	28	149	155	305	1422	711	67	70
	006	4	12	56	28	155	163	305	1422	711	70	74
	008	3	12	56	28	159	165	305	1422	711	72	75
	008	4	12	56	28	165	173	305	1422	711	75	78
	010	3	12	62	28	179	186	305	1575	711	81	84
	010	4	12	62	28	185	194	305	1575	711	84	88
012	3	12	62	28	188	196	305	1575	711	85	89	
012	4	12	62	28	195	200	305	1575	711	88	93	

HORIZONTAL BASIC

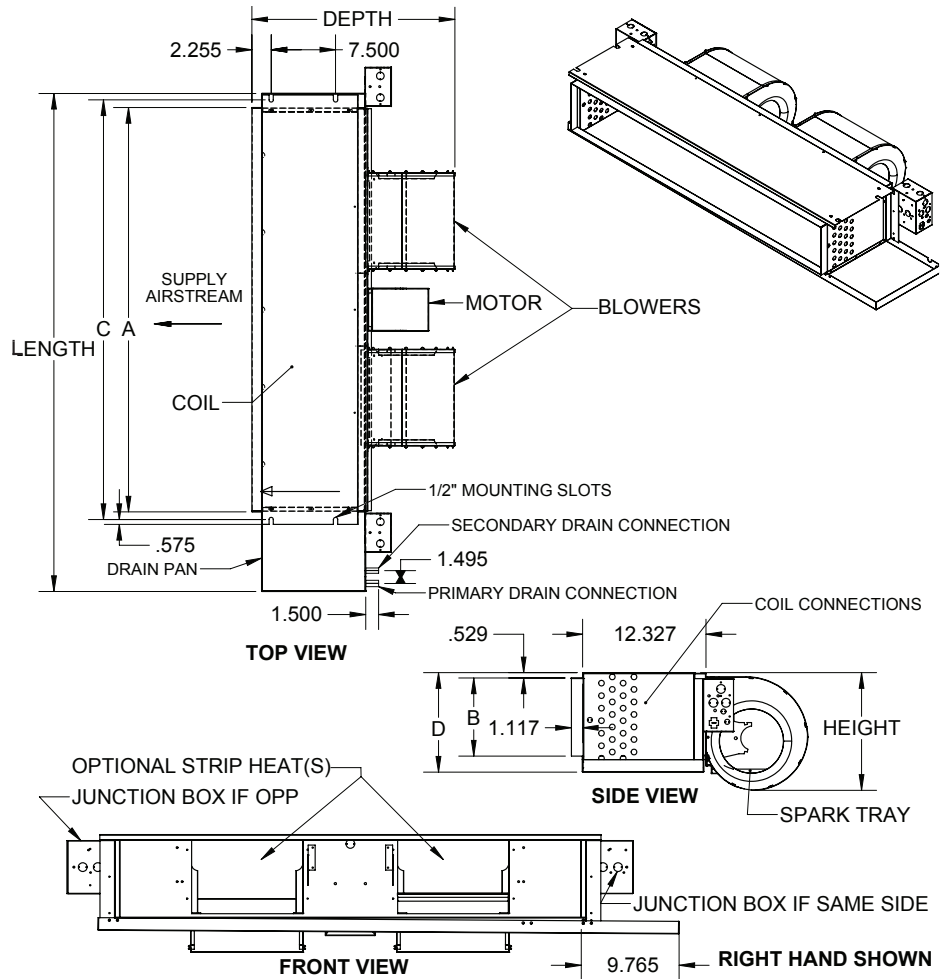
LH-B/200 - 300 CFM



- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW and HW on 002-003.

HORIZONTAL BASIC

LH-B/400 - 1,200 CFM

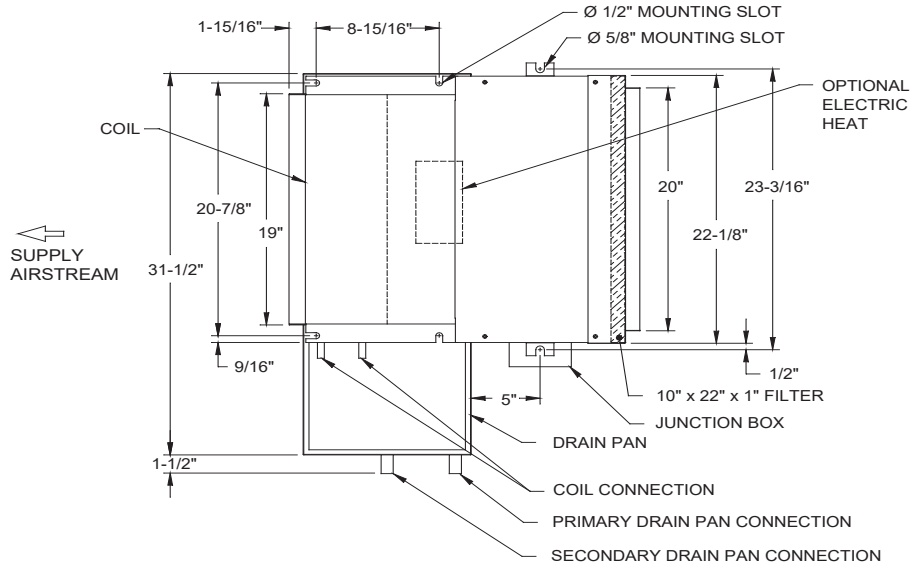


UNIT SIZE	OVERALL			SUPPLY DUCT				BLOWERS
	LENGTH	HEIGHT	DEPTH	A	B	C	D	
004	37.5	9.88	22.5	25.13	6	26.88	8	2
006	44	9.88	22.5	33.13	6	34.88	8	2
008	44	11.75	23.63	33.13	7.75	34.88	9.75	2
010	50	11.75	23.63	39.13	7.75	40.88	9.75	2
012	58	11.75	23.63	47.13	7.75	48.88	9.75	2

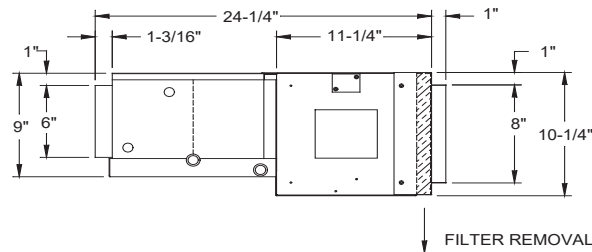
- All sizes shown in inches.
- Right-hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder-coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel
- Coil connections: 1/2" CW on 004-006, 3/4" CW on 008-012 and 1/2" HW on 004-012.

HORIZONTAL REAR RETURN AIR PLENUM

LH-R/200 - 1,200 CFM



TOP VIEW



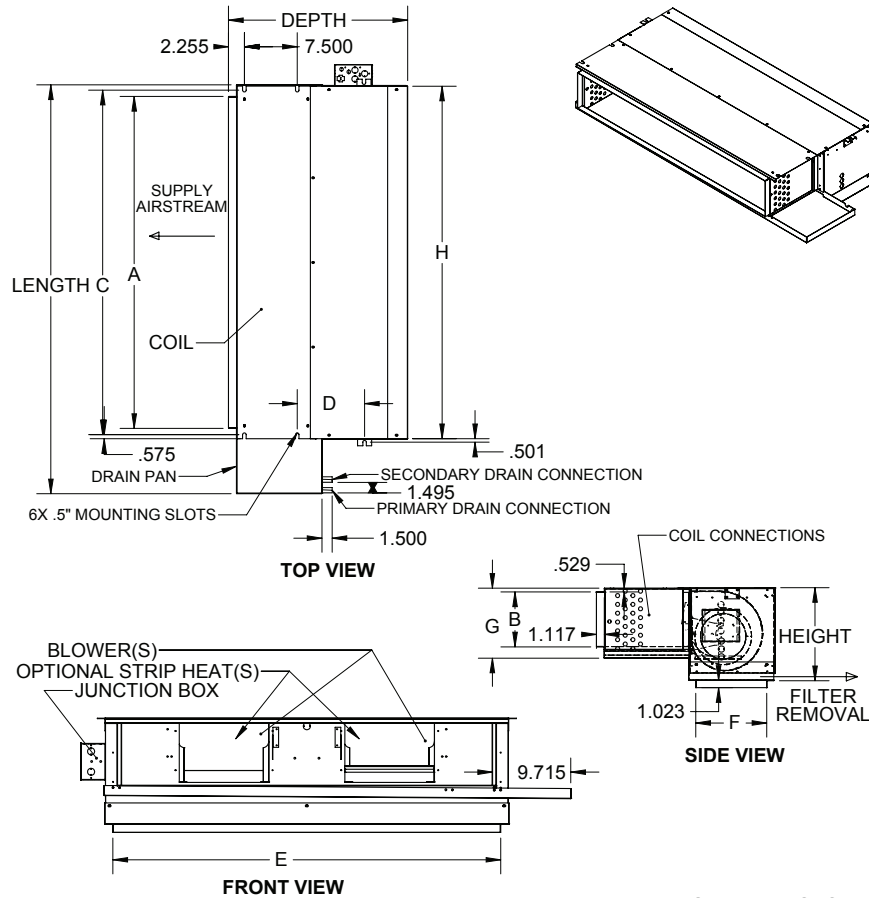
SIDE VIEW

OVERALL				SUPPLY DUCT		MOUNTING		RETURN DUCT					
UNIT SIZE	LENGTH	HEIGHT	DEPTH	A	B	C	D	E	F	G	H	BLOWERS	FILTER ZSIZE
002-003	30	11.19	23.38	19.13	6	20.88	8.5	20.13	8.08	8	22	1	10 X 22 X 1
004	37.5	11.19	23.38	25.13	6	26.88	8.5	29.13	8.08	8	31	2	10 X 31 X 1
006	44	11.19	23.38	33.13	6	34.88	8.5	34.13	8.08	8	36	2	10 X 36 X 1
008	44	13.19	25.38	33.13	7.75	34.88	9.5	34.13	10.08	9.75	36	2	12 X 36 X 1
010	50	13.19	25.38	39.13	7.75	40.88	9.5	40.13	10.08	9.75	42	2	12 X 42 X 1
012	58	13.19	25.38	47.13	7.75	48.88	9.5	48.13	10.08	9.75	50	2	12 X 50 X 1

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick Elastomeric insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW and HW on 002-003.

HORIZONTAL BOTTOM RETURN AIR PLENUM

LH-Q/200 - 1,200 CFM



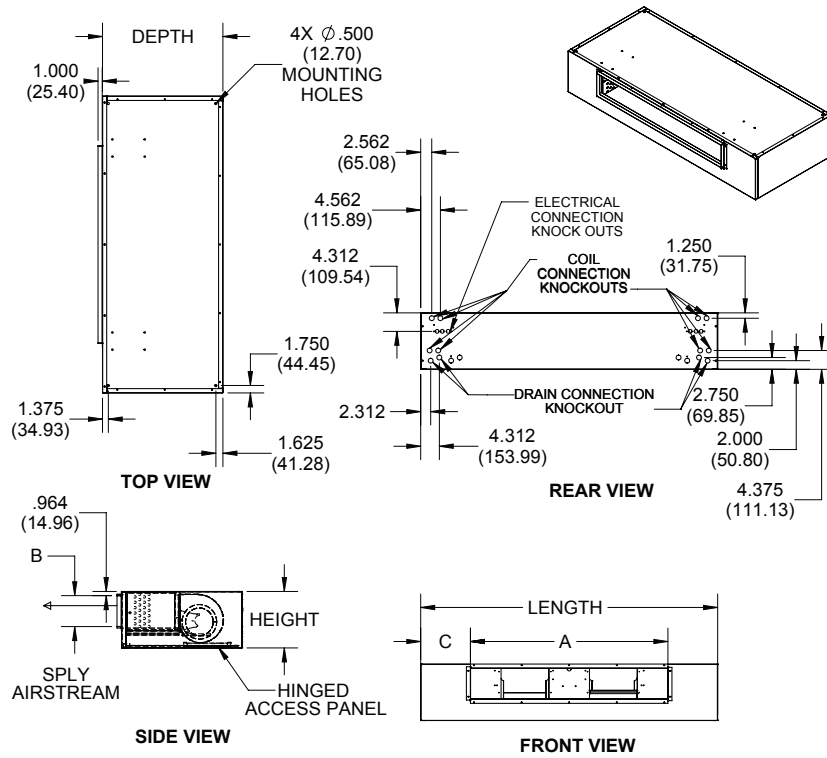
RIGHT HAND SHOWN

OVERALL				SUPPLY DUCT		MOUNTING		RETURN DUCT						
UNIT SIZE	LENGTH	HEIGHT	DEPTH	A	B	C	D	E	F	G	H	BLOWERS	FILTER ZSIZE	
002-003	30	11.19	23.38	19.13	6	20.88	8.5	20.13	8.08	8	22	1	10 X 22 X 1	
004	37.5	11.19	23.38	25.13	6	26.88	8.5	29.13	8.08	8	31	2	10 X 31 X 1	
006	44	11.19	23.38	33.13	6	34.88	8.5	34.13	8.08	8	36	2	10 X 36 X 1	
008	44	13.19	25.38	33.13	7.75	34.88	9.5	34.13	10.08	9.75	36	2	12 X 36 X 1	
010	50	13.19	25.38	39.13	7.75	40.88	9.5	40.13	10.08	9.75	42	2	12 X 42 X 1	
012	58	13.19	25.38	47.13	7.75	48.88	9.5	48.13	10.08	9.75	50	2	12 X 50 X 1	

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick Elastomeric insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on 004-006, 3/4" on 008-012 and 1/2" HW on 004-012.

HORIZONTAL DELUXE

LH-D/200 - 1,200 CFM

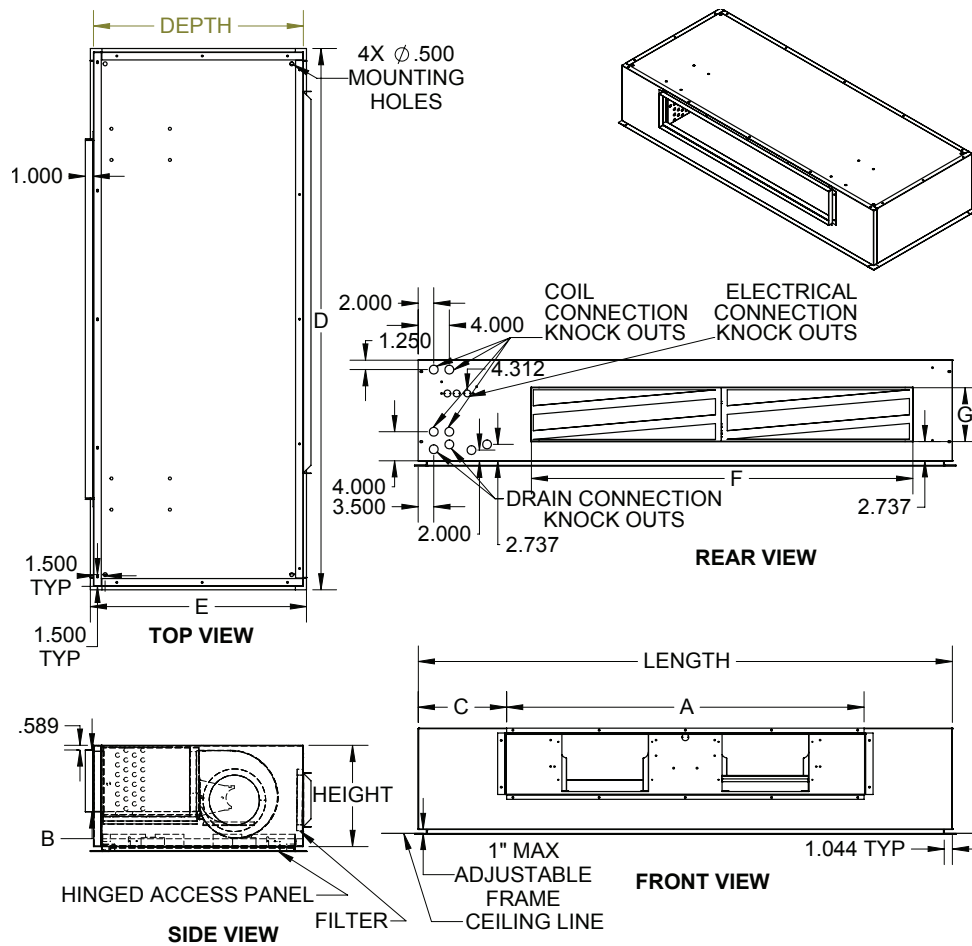


OVERALL				SUPPLY DUCT			BLOWERS	FILTER ZSIZE
UNIT SIZE	LENGTH	HEIGHT	DEPTH	A	B	C		
002-003	47	11.38	24	18.25	6.38	14.38	1	(2) 11 x 20 x 1
MM	1193.80	289.05	609.60	463.55	162.05	365.25		
004	47	11.38	24	24.25	6.38	11.378	2	(2) 11 x 20 x 1
MM	94.00	22.76	48.00	48.50	12.76	22.76		
006	55	11.38	28	32.25	6.38	11.38	2	(2) 11 x 24 x 1
MM	1397.00	289.05	711.20	819.15	162.05	289.05		
008	55	13.13	28	32.25	8	11.38	2	(2) 11 x 24 x 1
MM	1397.00	333.50	711.20	819.15	203.20	289.05		
010	69	13.13	28	38.25	8	15.38	2	(2) 11 x 27 x 1
MM	1752.60	222.50	711.20	971.55	203.20	390.65		
012	69	13.13	28	46.25	8	11.38	2	(2) 11 x 27 x 1
MM	1752.60	333.50	711.20	1174.75	203.20	289.05		

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick Elastomeric insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW and HW on 002-003.

HORIZONTAL FLUSH

LH-F/200 - 1,200 CFM



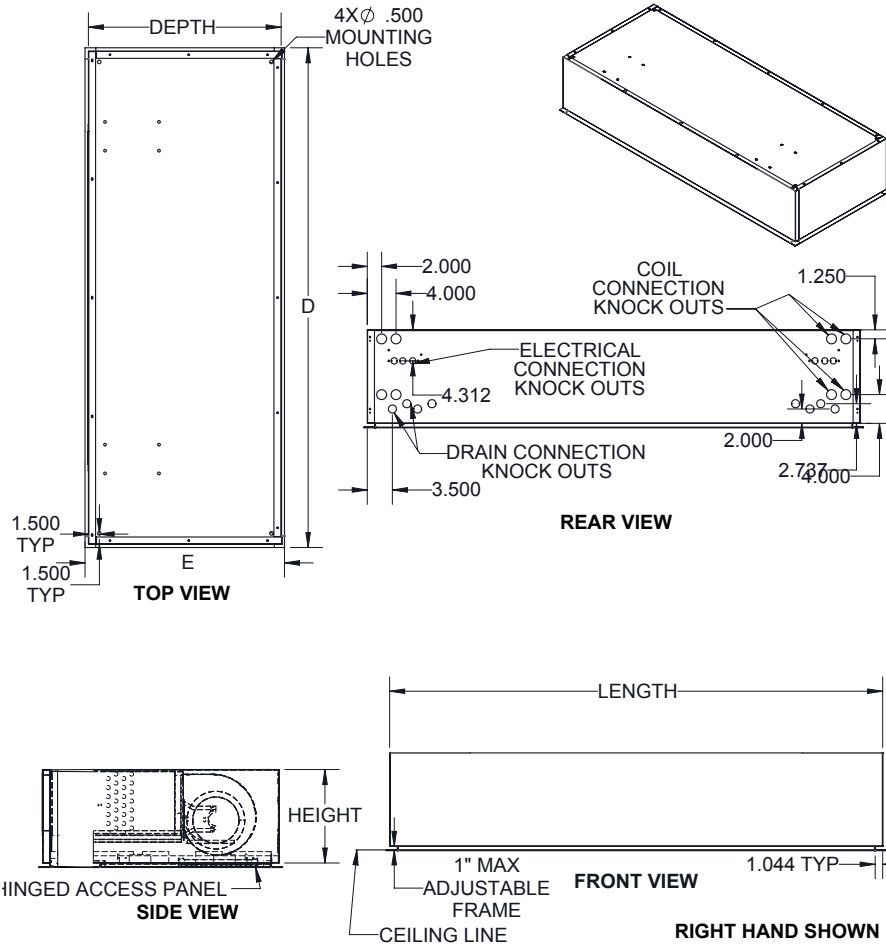
RIGHT HAND SHOWN

UNIT SIZE	OVERALL			SUPPLY DUCT			FRAME		RETURN DUCT		BLOWERS	FILTER ZSIZE
	LENGTH	HEIGHT	DEPTH	A	B	C	D	E	F	G		
002-003	46.5	11	27	18.25	6.38	14.13	47.5	27.75	29	7	1	(1) 8 x 30 x 1
004	46.5	11	27	24.25	6.38	11.13	47.5	27.75	29	7	2	(1) 8 x 30 x 1
006	54.5	11	27	32.25	6.38	11.13	55.5	27.75	39	7	2	(2) 8 x 20 x 1
008	54.5	13	27	32.25	8	11.13	55.5	27.75	39	9	2	(2) 8 x 20 x 1
010	68.5	13	27	38.28	8	15.13	69.5	27.75	49	9	2	(2) 8 x 25 x 1
012	68.5	13	27	46.25	8	11.13	69.5	27.75	49	9	2	(2) 8 x 25 x 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick Elastomeric insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on 004-006, 3/4" CW on 008-012 and 1/2" HW on 004-012.

HORIZONTAL FLUSH BOTTOM RETURN AND SUPPLY

LH-E / 200 - 1,200 CFM



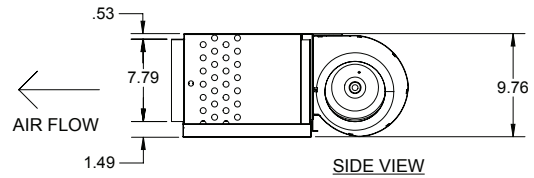
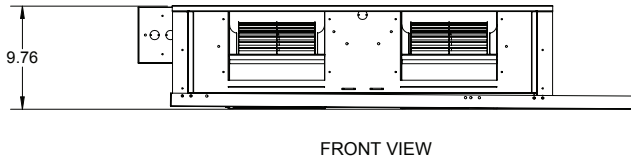
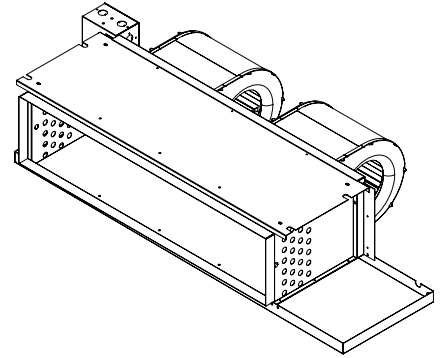
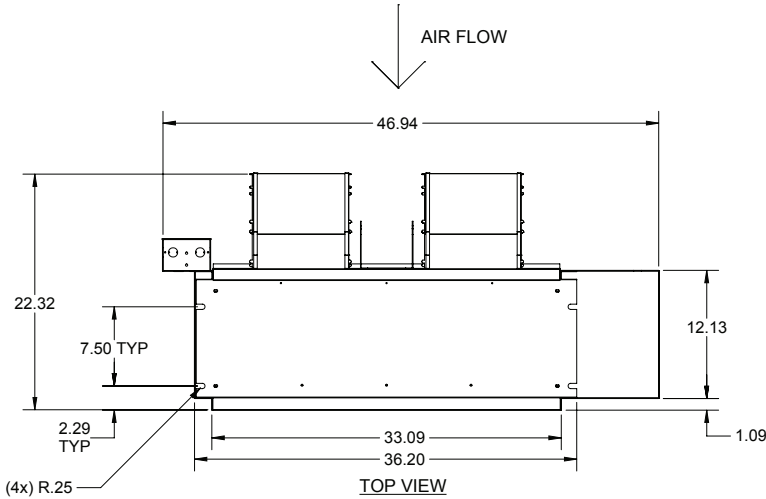
UNIT SIZE	OVERALL			FRAME		BLOWERS	FILTER Z SIZE	SA GRILLE
	LENGTH	HEIGHT	DEPTH	D	E			
002-003	46.5	11	38	47.5	38.75	1	(2) 11 X 22 X 1	18 x 6
004	46.5	11	38	47.5	38.75	2	(2) 11 X 20 X 1	24 x 6
006	54.5	11	38	55.5	38.75	2	(2) 11 X 24 X 1	32 x 6
008	54.5	13	44	55.5	44.75	2	(2) 11 X 24 X 1	32 x 8
010	68.5	13	44	69.5	44.75	2	(2) 11 X 27 X 1	36 x 8
012	68.5	13	44	69.5	44.75	2	(2) 11 X 27 X 1	42 x 8

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick Elastomeric insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW and HW on 002-003.

CERTIFIED DIMENSIONAL DRAWINGS - LH SERIES

HORIZONTAL LH SERIES

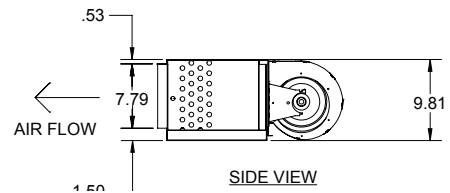
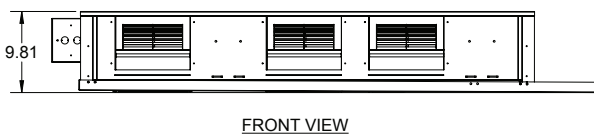
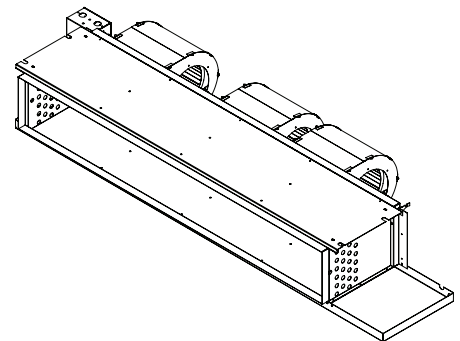
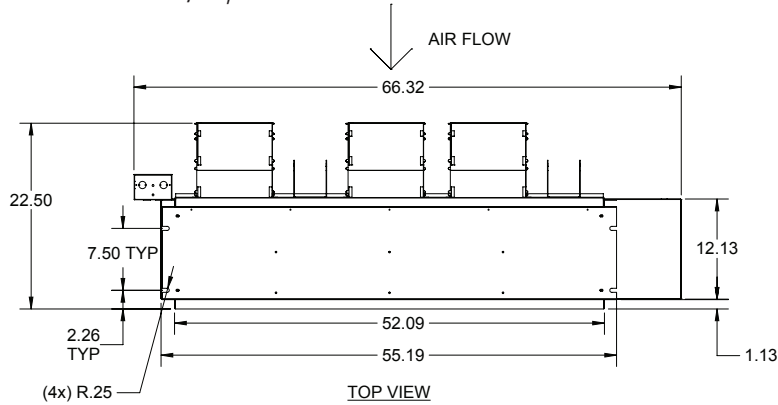
LH-X 008 / 800 CFM



CERTIFIED DIMENSIONAL DRAWINGS - LH SERIES

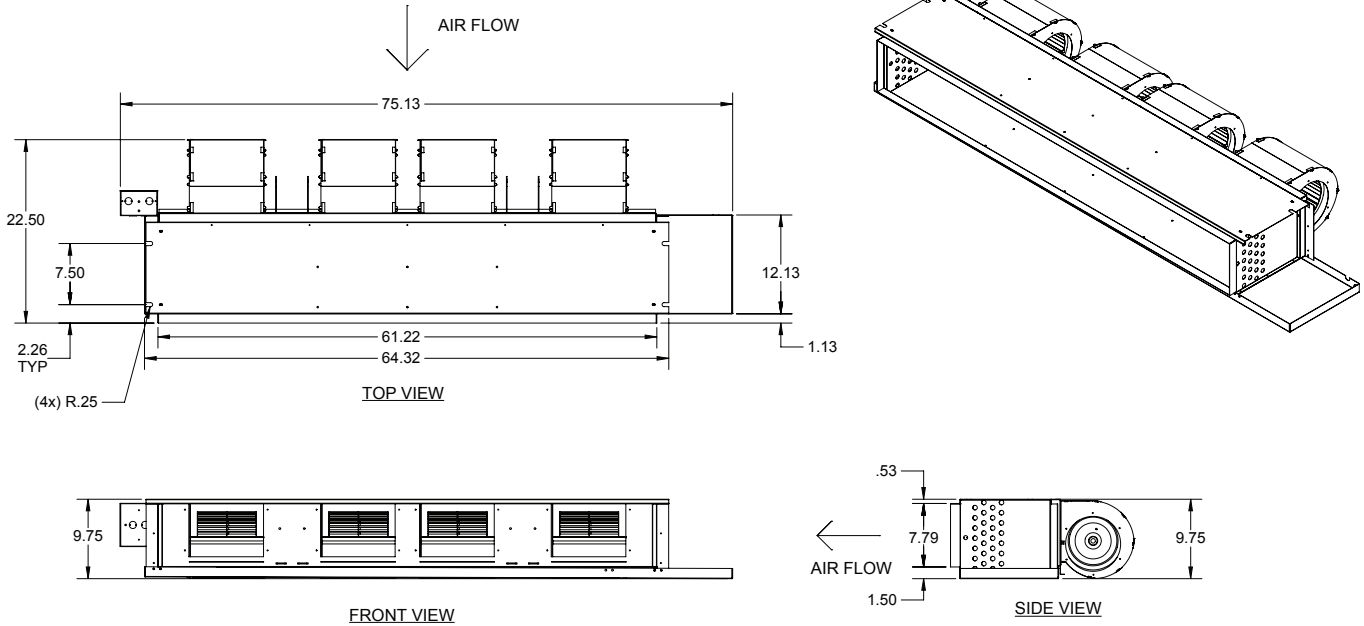
HORIZONTAL LH SERIES

LH-X 010 / 1,000 CFM



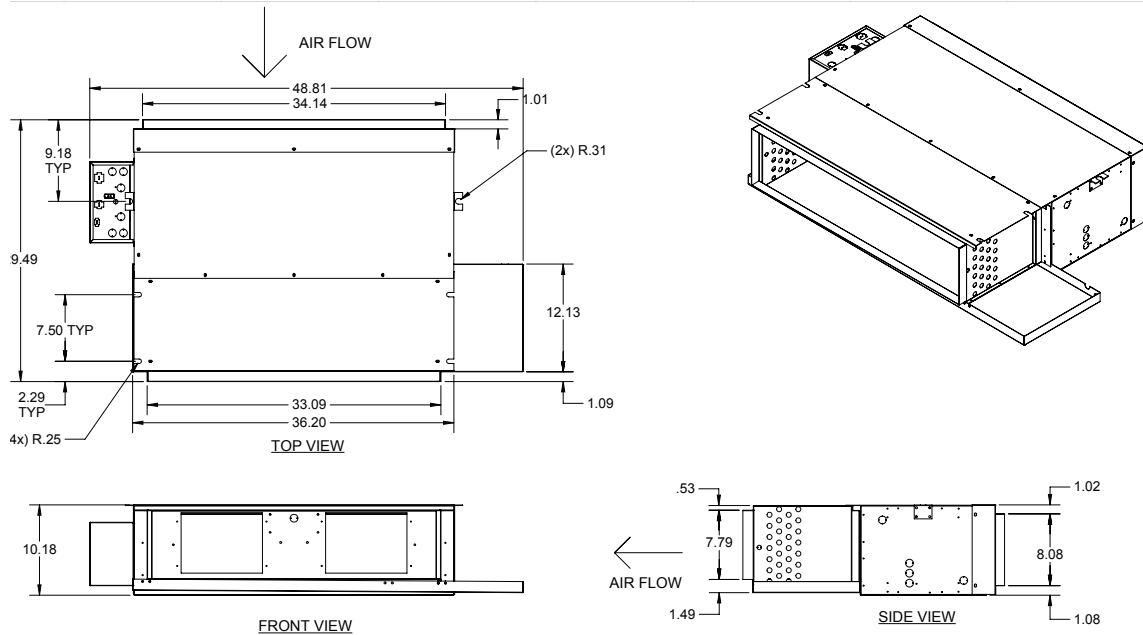
HORIZONTAL LH SERIES

LH-X 012 / 1,200 CFM



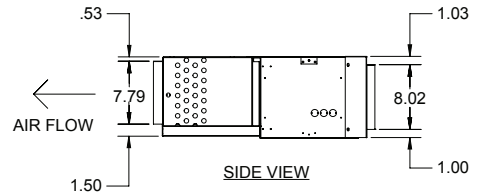
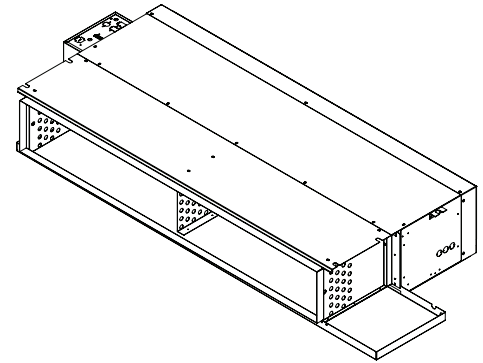
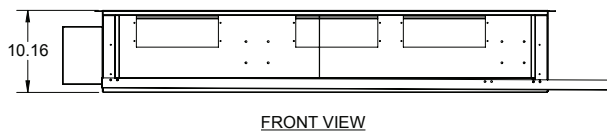
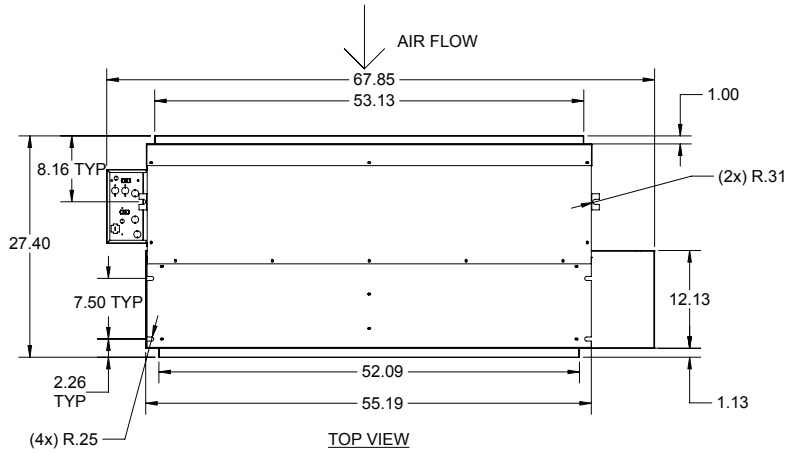
HORIZONTAL LH SERIES

LH-Y 008 / 800 CFM



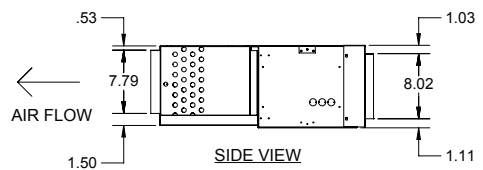
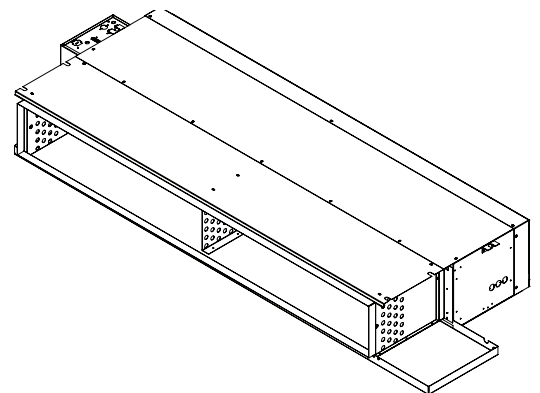
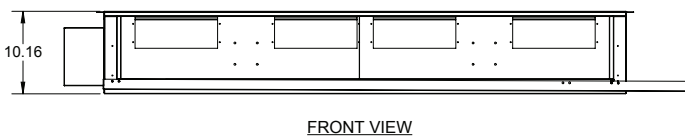
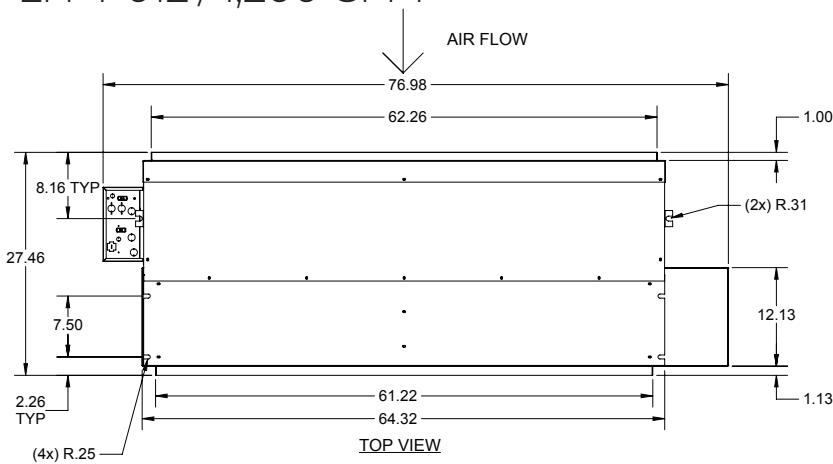
HORIZONTAL LH SERIES

LH-Y 010 / 1,000 CFM



HORIZONTAL LH SERIES

LH-Y 012 / 1,200 CFM



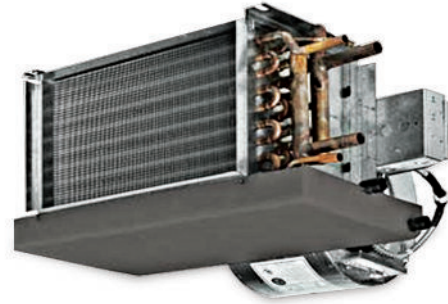
HIGH PERFORMANCE HORIZONTAL FAN COILS

HH SERIES

600 - 2,200 CFM

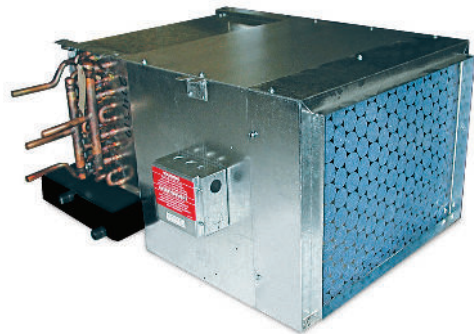
HIGH PERFORMANCE HORIZONTAL BASIC / HH-B

The low profile and flexible design of the Horizontal Basic (HH-B) fan coil is the right choice for multiple applications where high static performance is required. The slim, compact design is well suited for drop ceiling, closet, hallway and other concealed applications. This unit comes with a powder coated epoxy drain pan and a wide range of coil, motor and controls options. These models have no exterior cabinet.



HIGH PERFORMANCE HORIZONTAL WITH RETURN-AIR PLENUM / HH-R

The Horizontal Rear Return Air Plenum (HH-R) is our basic fan coil for high static application with a galvanized rear return air plenum and filter. Ideal for mounting above ceilings, in closets, hallways and bathroom areas, the plenum conceals the unit's blower motor, which is easily accessible for service by removing the bottom panel. Horizontal Bottom Return also available.



HIGH PERFORMANCE HORIZONTAL DELUXE / HH-D

The Horizontal Deluxe (HH-D) fan coil is designed for horizontal exposed ceiling mounted applications where high static performance is required. This unit is our basic unit housed in a fully cased cabinet intended for "free-blow" exposed ceiling mounting. Ideal for remodel situations where adding AC ductwork is limited. Deluxe cabinets are constructed of cold rolled steel and finished with a soft white epoxy powder-coated finish, and subjected to a 1500-hour salt spray test in accordance with ASTM-B117.



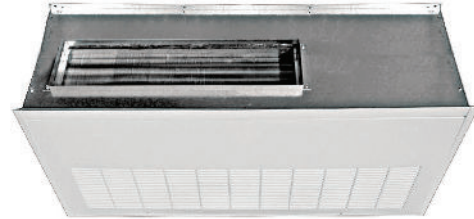
HIGH PERFORMANCE HORIZONTAL FAN COILS

HH SERIES

600 - 2,200 CFM

HIGH PERFORMANCE HORIZONTAL FLUSH BOTTOM SUPPLY & RETURN / HH-F

The Horizontal Flush (HH-F) is a recessed fan coil designed for flush ceiling applications. The telescoping frame and hinged access panel allow it to fit any type of ceiling. The access panel comes in the same attractive, durable powder coated as the Horizontal Deluxe. Unit comes standard with bottom return front supply. '



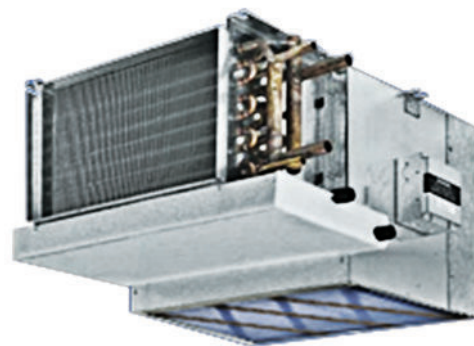
HIGH-PERFORMANCE HORIZONTAL DELUXE WITH BOTTOM SUPPLY & RETURN / HH-E

The High Performance Horizontal Deluxe Bottom Supply & Return (HH-E) is a high static (up to .50 ESP) recessed fan coil designed for flush ceiling applications. The HH-E comes with a coil, blower/motor assembly with quick connect plug and a galvanized steel, powder coated epoxy drain pan covered with 1/8" thick insulation. Deluxe cabinets are constructed of cold rolled steel and finished with 385° baked on tough, soft-white epoxy powder coated finish.



HIGH PERFORMANCE HORIZONTAL BOTTOM RETURN AIR PLENUM / HH-Q

The High Performance Horizontal Bottom Return Air Plenum (HH-Q) is a high static (up to .50 ESP) fan coil that comes with a coil, blower/motor assembly with quick connect plug and a galvanized steel, powder coated epoxy drain pan covered with 1/8" thick insulation. The galvanized steel plenum is insulated with 1/2" thick, over three pound density, neoprene coated fiberglass. The plenum conceals the fan and motor assembly that is easily accessed for service by removing the back panel. This unit is easily mounted above ceilings, in closets, and in hallways.



AHRI CERTIFIED COOLING CAPACITY

HH SERIES



Williams high performance horizontal fan coils are labeled and approved by the Air-Conditioning, Heating & Refrigeration Institute (AHRI). This designation signifies that Williams high performance vertical fan coil units have been rated as follows in accordance with the latest edition of ANSI/AHRI 440 with Addendum 1 Performance Rating of Room Fan Coils and subject to rating accuracy by AHRI sponsored, independent, third-party testing.

AHRI APPROVED STANDARD RATINGS				COOLING CAPACITY			POWER INPUT (WATTS)
SIZE	STYLE	RATED CFM	GPM	WPD (FT/H ₂ O)	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	
006	B	730	3.0	4.0	15,070	13,180	273
	R, Q	680	2.9	3.7	14,500	12,360	268
	D, E, F	650	2.8	3.6	14,160	11,860	262
008	B	900	4.1	7.3	20,580	17,330	380
	R, Q	875	4.0	7.0	20,190	16,900	371
	D, E, F	850	4.0	6.8	19,800	16,490	366
010	B	1,120	5.7	4.2	26,940	23,160	403
	R, Q	1,025	5.4	3.8	26,680	21,520	398
	D, E, F	1,010	5.3	3.8	38,080	21,260	392
012	B	1,370	7.6	4.7	35,930	28,770	540
	R, Q	1,250	7.2	4.6	35,570	28,420	532
	D, E, F	1,250	7.1	4.9	45,120	36,870	524
015	B	1,650	9.0	4.9	45,120	36,870	548
	R, Q	1,600	8.8	4.8	44,230	36,000	536
	D, E, F	1,500	8.5	4.5	42,450	34,250	806
018	B	2,180	12.1	8.6	60,510	48,900	806
	R, Q	2,060	11.7	8.1	58,410	46,860	786
	D, E, F	2,000	11.4	7.8	57,220	45,700	762
022	B	2,540	14.8	12.0	73,960	58,480	1060
	R, Q	2,290	13.8	11.5	69,190	53,870	1026
	D, E, F	2,230	13.6	11.2	68,160	52,870	998

Notes: 1) Based on 80°F DB and 67°F WB EAT, 45°F EWT, 10°F temperature rise, high fan speed. Motor voltage 115/1/60 power source. Air flow under dry coil conditions. Water pressure drops shown in feet of water. All units are listed under UL Category Control No. LZFE.

2) Ratings are based on actual CFM. Standard coils for 006-022 is 4 rows.

3) Legend - B = Basic; R = Rear return-air plenum; Q = Bottom return-air plenum; D = Deluxe; E = Bottom deluxe supply and bottom return and F = Flush.

COIL DATA

HH SERIES

Coils are made from ½" O.D. copper tubing with .016" wall thickness, and tubes are staggered for maximum heat transfer. A manual air vent is standard on all hydronic coils. DX and steam coils do not include manual air vent. All coils are 100% underwater pressure tested to 350 PSIG with a 300 PSIG working pressure. Steam coils are rated for up to 15 PSIG or 250°F.

Coils are available in two or four pipe, and from one to six row configurations for HH Series units. All units available with any combination of chilled or hot water, steam or direct expansion. Custom circuiting is available.

COIL ROW	003	004	006	008	010	012	015	018	022
Single-Row Coil									
Two-Row Coil									
Three-Row Coil									
Four-Row Coil									
Five-Row Coil									
*Six-Row Coil									

COIL OPTIONS:

- DX – Includes distributor and nozzle, TXV must be field furnished and installed
- Steam – 1-15 PSIG
- Preheat Coil Position – Standard coil is reheat position
- Phenolic Anti-Corrosion Coating (PAC) custom.
- 10-15 Fins Per Inch (Standard is 12 FPI)

Coil connections on the chilled water side for and HH006 is ½" and ¾" HH008-022. The hot water connection is ½" on HH006-022.

HEATING PERFORMANCE

HH SERIES

HEATING PERFORMANCE					
SIZE	COIL ROWS/(FPI)	RATED CFM	MBH	GPM	WPD (FT./H2O)
006	1 Row (12)	665	18.8	0.9	1.0
	2 Row (12)	665	31.8	1.6	0.8
008	1 Row (12)	855	25.8	1.3	1.7
	2 Row (12)	855	43.4	2.2	1.4
010	1 Row (12)	1,010	33.9	1.7	3.0
	2 Row (12)	1,010	55.8	2.8	2.3
012	1 Row (12)	1,250	38.4	1.9	0.8
	2 Row (12)	1,250	68.3	3.4	2.0
015	1 Row (12)	1,580	49.6	2.5	1.3
	2 Row (12)	1,580	85.9	4.3	3.1
018	1 Row (12)	2,005	62.1	3.1	1.9
	2 Row (12)	2,005	107.3	5.4	4.8
022	1 Row (12)	2,285	72.2	3.6	2.6
	2 Row (12)	2,285	124.4	6.2	6.5

Notes: Based on 70°F DB EAT, 180°F EWT, 40°F temperature drop, high fan speed. Motor voltage 115/1/60 power source. Air flow under dry coil conditions. Water pressure drops shown in feet of water.

ELECTRIC HEAT

HH SERIES

Electric heat may be furnished with either hydronic, direct expansion or steam coils and is factory mounted, wired, and tested. Option equipped with low watt density (for long life) nichrome wire elements. The heater has a built-in, high limit, and fusible link to provide maximum safety. Can only be installed in preheat position.

MODEL / SIZE	kW	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
	VOLTAGE	AMPS															
006	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2								
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4								
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4								
008	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
010	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
012	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
015	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
018	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
022	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9

AIR FLOW DATA

HH SERIES

Air flow shown below is under dry coil conditions.

AIR FLOW DATA			EXTERNAL STATIC PRESSURE																	
SIZE	MODEL / STYLE	COIL ROWS	0.00			0.05			0.10			0.15			0.20			0.25		
			HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW
006	HH series (high static)	3 ROW	680	545	415	665	505	405	645	505	385	620	485	365	595	465	340	565	440	315
		4 ROW	670	535	405	655	495	395	635	495	375	610	475	355	585	455	330	555	430	305
008	HH series (high static)	3 ROW	875	760	605	855	725	595	825	725	580	800	705	565	780	685	550	750	660	525
		4 ROW	865	750	595	845	715	585	815	715	570	790	695	555	770	675	540	740	650	515
010	HH series (high static)	4 ROW	1025	835	635	1010	810	625	980	810	610	955	785	590	925	760	565	880	720	535
		5 ROW	1010	820	620	995	795	610	965	795	595	940	770	575	910	745	550	865	705	520
012	HH series (high static)	4 ROW	1250	1005	650	1230	975	640	1200	975	620	1165	955	600	1125	935	580	1090	905	550
		5 ROW	1235	980	635	1215	960	625	1185	960	605	1150	940	585	1110	920	565	1075	890	535
015	HH series (high static)	4 ROW	1640	1220	1030	1615	12410	1010	1565	1240	980	1510	1200	940	1460	1155	880	1405	1090	820
		5 ROW	1620	1270	1010	1595	1220	990	1545	1220	960	1490	1180	920	1440	1135	860	1385	1070	800
018	HH series (high static)	4 ROW	2085	1780	1370	2050	1695	1340	2000	1695	1305	1940	1640	1235	1870	1570	1170	1780	1485	1090
		5 ROW	2085	1760	1350	2030	1675	1320	1980	1675	1285	1920	1620	1215	1850	1550	1150	1760	1465	1070
022	HH series (high static)	4 ROW	2310	2055	1375	2285	2000	1365	2235	2000	1350	2165	1950	1330	2105	1900	1300	2030	1845	1250
		5 ROW	2290	2035	1355	2265	1980	1345	2215	1980	1330	2145	1930	1310	2085	1880	1280	2010	1825	1230

MOTOR DATA

HH SERIES

Motors are wired to a junction box ready for single point field connection.

OUTSTANDING MOTOR FEATURES:

- Quick connect plug
- Permanent split capacitor
- Thermal overload protection
- 1050 RPM for lower operating costs
- Oversized bearings and permanently lubricated and sealed
- 122°F maximum operating temperature
- Custom motor mounts designed to reduce noise and eliminate vibration
- Stators are epoxy dipped for more efficient motor cooling

OPTIONAL MOTORS:

- 208V-1Ø-60 motors
- 277V-1Ø-60 motors
- 230/220V-1Ø-60 motors
- 50-Hz motors in specified voltages

60 HERTZ SINGLE-PHASE MOTORS (1100 RPM)				VOLTAGE / WATTS							
				115V		208V		230V		277V	
SIZE	MODEL / MOTOR TYPE	HP (QTY)	BLOWERS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
006	HH series (high static)	1/6 (1)	1	2.2	280	1.10	280	1.0	280	0.8	280
008	HH series (high static)	1/4 (1)	1	3.2	330	1.70	330	1.5	330	1.2	330
010	HH series (high static)	1/4 (1)	1	3.2	378	1.60	378	1.5	378	1.2	378
012	HH series (high static)	1/3 (1)	1	4.5	403	2.60	403	2.4	403	1.8	400
015*	HH series (high static)	1/6 (2)	2	4.6	560	2.20	560	2.0	560	1.6	560
018*	HH series (high static)	1/4 (2)	2	6.4	660	3.30	660	3.0	660	2.4	660
022*	HH series (high static)	1/3 (2)	2	9.0	806	5.20	806	4.8	806	3.6	806

* Data reflects combined performance of (2) motors. Notes: Motor full load amps listed refer to NEC amps. Actual motor nameplate amps may vary.

SOUND DATA (PSC MOTOR)

HH SERIES

SIZE	MODEL	FAN SPEED	OCTAVE BAND						
			2	3	4	5	6	7	8
			CENTER FREQUENCY (CPS)						
			125	250	500	1000	2000	4000	8000
006	HH series	high	60.0	61.0	55.0	54.0	50.5	46.0	36.5
		medium	54.0	56.0	49.0	46.0	41.0	35.0	24.0
008	HH series	high	61.0	63.0	56.0	55.0	52.0	47.0	38.0
		medium	57.0	58.0	50.0	47.0	43.0	36.0	24.5
010	HH series	high	62.0	64.0	58.0	57.0	53.0	48.0	39.0
		medium	58.5	60.0	51.5	49.0	44.0	37.0	25.0
012	HH series	high	63.5	65.5	60.5	58.0	54.0	49.5	40.5
		medium	59.0	60.5	56.0	50.0	44.5	39.0	25.5
015	HH series	high	55.5	59.5	60.5	57.5	55.0	51.0	48.0
		medium	51.0	53.5	53.0	49.5	45.0	40.0	26.5
018	HH series	high	57.5	61.0	62.5	59.0	58.0	54.0	43.0
		medium	52.5	60.0	55.0	51.0	48.5	42.0	31.0
022	HH series	high	60.0	63.0	64.0	61.0	59.5	57.0	46.0
		medium	55.0	57.0	57.0	53.0	49.0	45.0	33.0

- Notes:**
- 1) Power levels are in dB RE 10-12 watts.
 - 2) Sound data tested in accordance with ASHRAE standard 68 and AHRI standard 260 and 350.
 - 3) Air flow under dry coil conditions.



WEIGHTS AND MEASUREMENTS

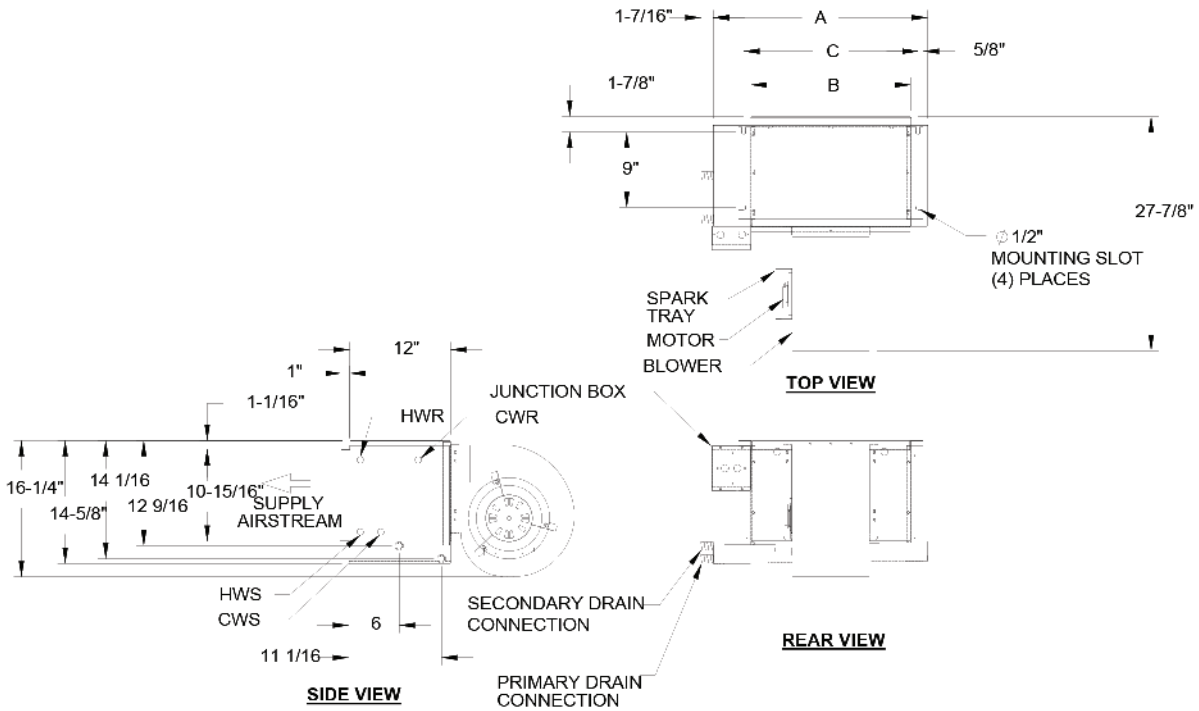
HH SERIES

The following HH Series weights and measures are based on fan coil units only. Add approximately 20% for packaging and crating.

UNIT	MODEL	ROWS	DIMENSIONS / INCHES			WEIGHT / LBS.		DIMENSIONS / MILLIMETERS			WEIGHT / KG	
			HEIGHT	WIDTH	DEPTH	DRY	WET	HEIGHT	WIDTH	DEPTH	DRY	WET
HH SERIES BASIC	006	3	17	22	28	110	114	432	559	711	84	52
	006	4	17	22	28	114	119	432	559	711	50	54
	008	3	17	26	28	120	125	432	661	711	52	57
	008	4	17	26	28	125	132	432	661	711	54	60
	010	4	17	32	28	127	136	432	813	711	57	61
	010	5	17	32	28	132	143	432	813	711	58	64
	012	4	17	38	28	135	143	432	965	711	60	66
	012	5	17	38	28	141	155	432	965	711	61	70
	015	4	17	44	28	190	203	432	1118	711	64	92
	015	5	17	44	28	196	213	432	1118	711	86	97
	018	4	17	50	28	225	241	432	1270	711	89	109
	018	5	17	50	28	232	252	432	1270	711	102	114
022	4	17	56	28	245	263	432	1423	711	105	119	
022	5	17	56	28	252	274	432	1423	711	111	124	
HH SERIES RETURN AIR PLENUM	006	3	18	22	32	125	129	457	559	813	114	59
	006	4	18	22	32	129	134	457	559	813	57	61
	008	3	18	26	32	135	140	457	661	813	58	64
	008	4	18	26	32	140	147	457	661	813	61	67
	010	4	18	32	32	145	154	457	813	813	63	70
	010	5	18	32	32	150	161	457	813	813	66	73
	012	4	18	38	32	150	161	457	965	813	68	73
	012	5	18	38	32	156	170	457	965	813	68	77
	015	4	18	44	32	210	223	457	1118	813	71	101
	015	5	18	44	32	156	233	457	1118	813	95	106
	018	4	18	50	32	250	266	457	1270	813	98	120
	018	5	18	50	32	257	277	457	1270	813	113	125
022	4	18	56	32	270	288	457	1423	813	117	130	
022	5	18	56	32	277	299	457	1423	813	122	136	
HH SERIES DELUXE	006	3	19	33	32	140	144	483	838	813	126	65
	006	4	19	33	32	144	149	483	838	813	64	68
	008	3	19	37	32	155	160	483	940	813	65	73
	008	4	19	37	32	160	167	483	940	813	70	76
	010	4	19	43	32	165	174	483	1092	813	72	79
	010	5	19	43	32	170	181	483	1092	813	75	82
	012	4	19	49	32	175	186	483	1245	813	77	84
	012	5	19	49	32	181	195	483	1245	813	79	89
	015	4	19	55	32	230	243	483	1997	813	82	110
	015	5	19	55	32	236	253	483	1397	813	104	115
	018	4	19	61	32	270	286	483	1549	813	107	130
	018	5	19	61	32	277	297	483	1549	813	122	135
022	4	19	67	32	290	308	483	1702	813	126	140	
022	5	19	67	32	297	319	483	1702	813	132	145	
HH SERIES FLUSH	006	3	19	48	32	130	134	483	1219	813	135	61
	006	4	19	48	32	134	139	483	1219	813	59	63
	008	3	19	48	32	145	150	483	1219	813	61	68
	008	4	19	48	32	150	157	483	1219	813	66	71
	010	4	19	48	32	150	159	483	1219	813	68	72
	010	5	19	48	32	155	166	483	1219	813	68	75
	012	4	19	56	32	160	171	483	1422	813	70	78
	012	5	19	56	32	166	180	483	1422	813	73	82
	015	4	19	58	32	215	228	483	1473	813	75	104
	015	5	19	58	32	221	238	483	1473	813	98	108
	018	4	19	62	32	255	271	483	1575	813	100	123
	018	5	19	62	32	262	282	483	1575	813	116	128
022	4	19	68	32	275	293	483	1727	813	119	133	
022	5	19	68	32	282	304	483	1727	813	125	138	

HIGH PERFORMANCE HORIZONTAL BASIC

HH-B / 600 - 1,200 CFM

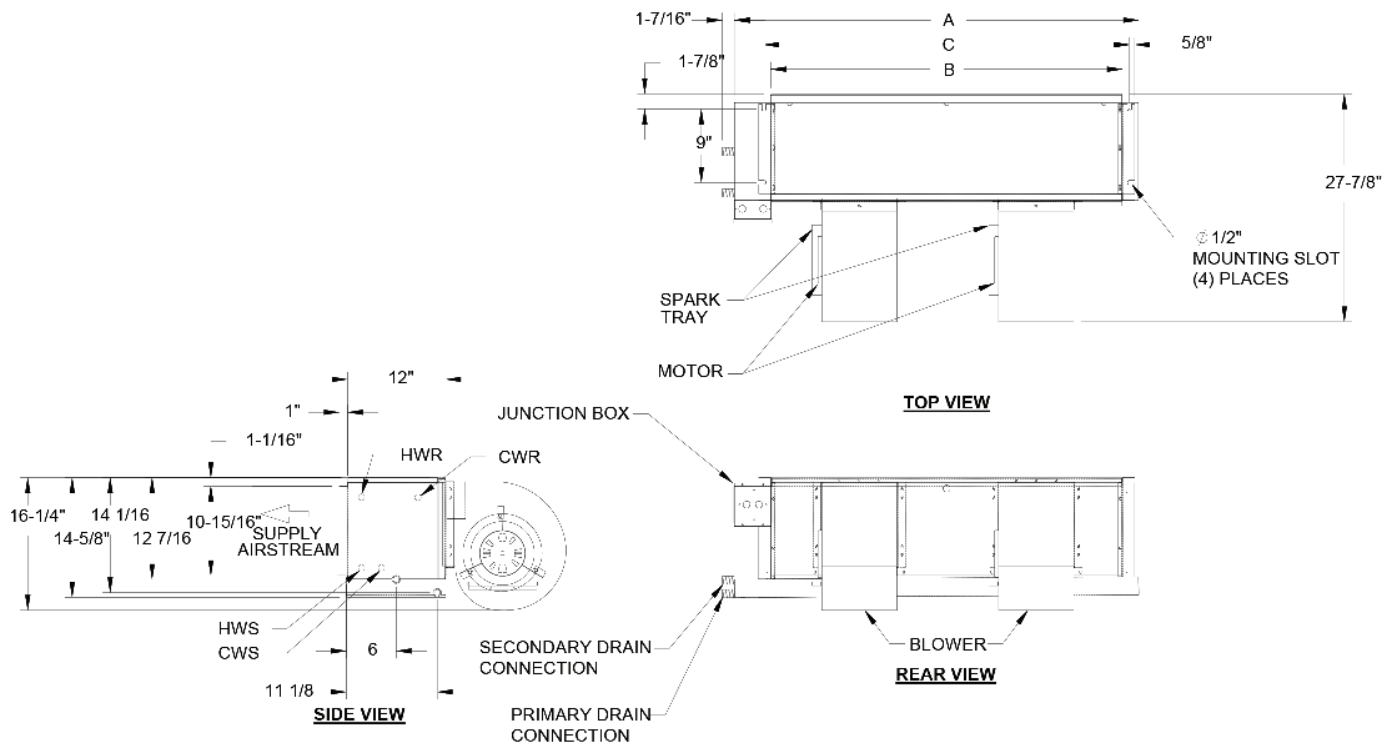


MODEL BASIC	A	B	C
600	21-1/2	15	16-3/4
800	25-1/2	19	20-3/4
1000	31-1/2	25	26-3/4
1200	37-1/2	31	32-3/4

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy-gauge, galvanized steel.
- Coil connections: 1/2" CW on HH-006, 3/4" CW on HH008-012 and 1/2" HW on HH006-012.

HIGH PERFORMANCE HORIZONTAL BASIC

HH-B / 1,500 - 2,200 CFM

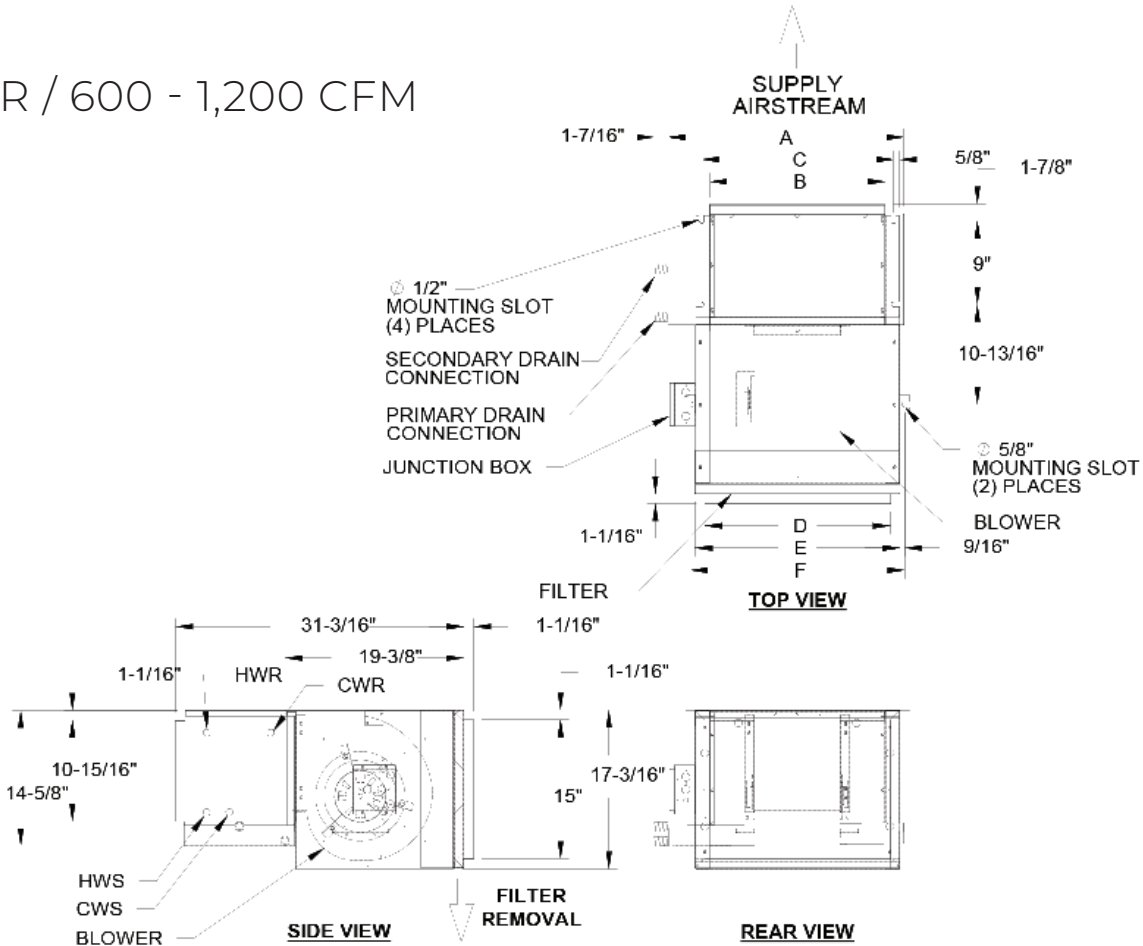


MODEL BASIC	A	B	C
1500	43-1/2	37	38-3/4
1800	49-1/2	43	44-3/4
2200	55-1/2	49	50-3/4

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder-coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy-gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022, and 1/2" HW on HH015-022. 1/2" HW on HH015-022.

HIGH PERFORMANCE HORIZONTAL WITH REAR RETURN AIR PLENUM

HH-R / 600 - 1,200 CFM

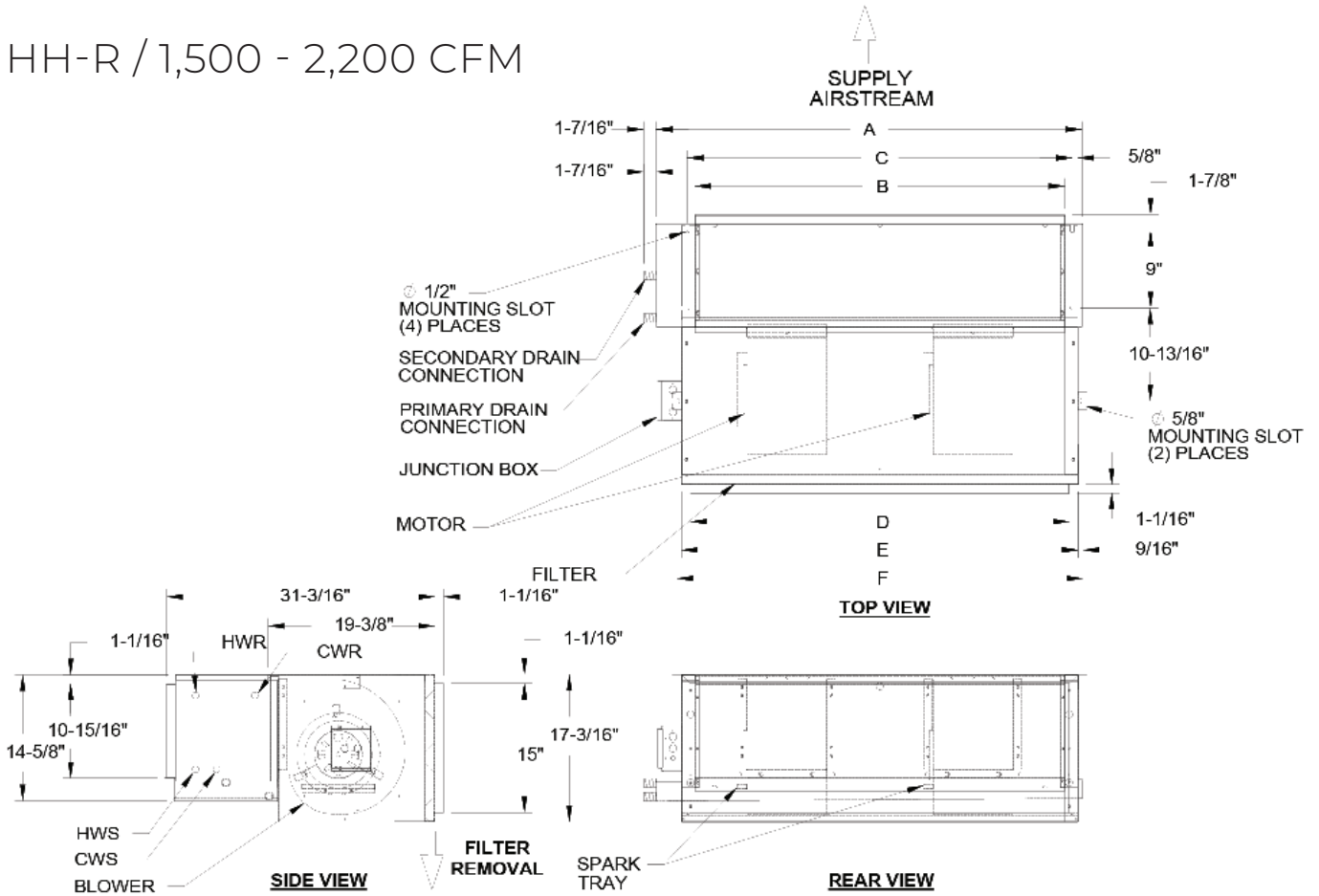


MODEL REAR RETURN AIR	A	B	C	D	E	F	FILTER SIZE
600	21-1/2	15	16	16-1/16	19-3/16	19-3/8	17 X 18 X 1
800	25-1/2	19	20	20-1/16	23-3/16	23-3/8	17 X 22 X 1
1000	31-1/2	25	26	26-1/16	29-3/16	29-3/8	17 X 28 X 1
1200	37-1/2	31	32	32-1/16	35-3/16	35-3/8	17 X 34 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on HH006, 3/4" on HH008-012 and 1/2" HW on HH006-012.

HIGH PERFORMANCE HORIZONTAL WITH REAR RETURN AIR PLENUM

HH-R / 1,500 - 2,200 CFM

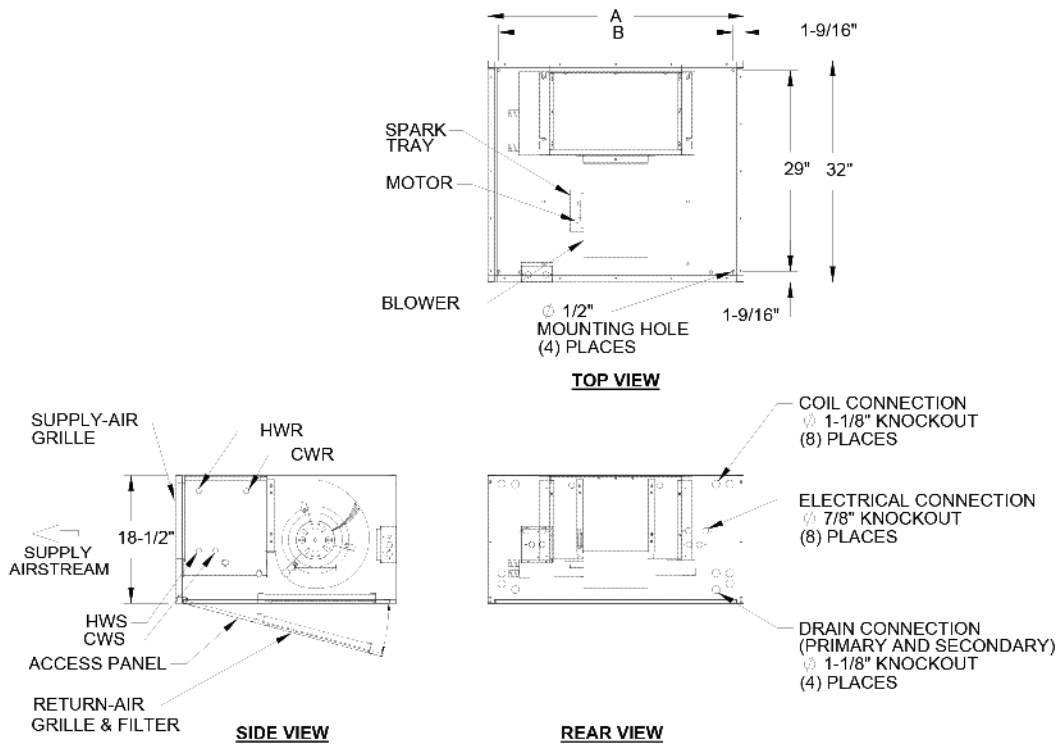


MODEL REAR RETURN AIR	A	B	C	D	E	F	FILTER SIZE
1500	43-1/2	37	38-3/4	38-1/16	40-1/8	41-3/16	17 X 40 X 1
1800	49-1/2	43	44-3/4	44-1/16	46-1/8	47-3/16	17 X 46 X 1
2200	55-1/2	49	50-3/4	50-1/16	52-1/8	53-3/16	17 X 50 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy-gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022 and 1/2" HW on HH015-022.

HIGH PERFORMANCE HORIZONTAL DELUXE

HH-D / 600 - 1,200 CFM

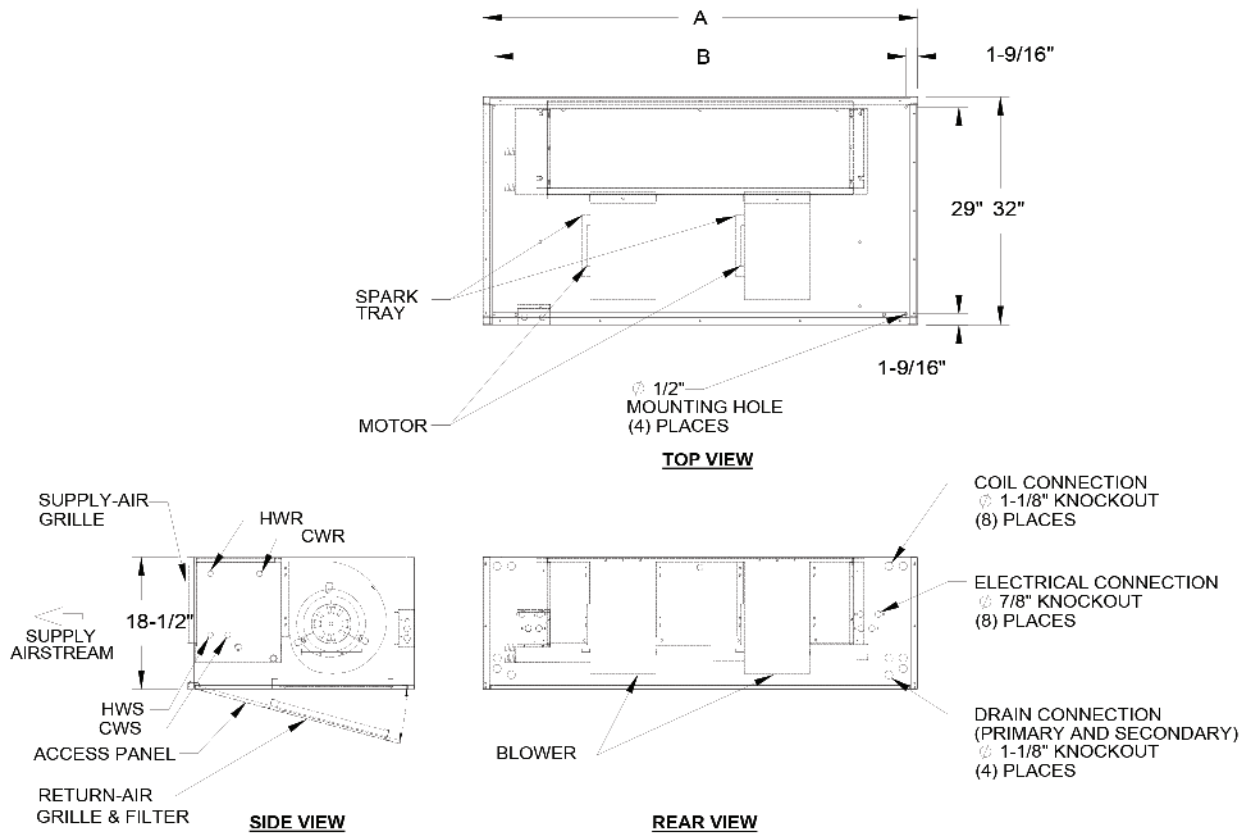


MODEL DELUXE	A	B	FILTER SIZE
600	33	29-7/8	17 X 28 X 1
800	37	33-7/8	17 X 34 X 1
1000	43	39-7/8	17 X 40 X 1
1200	49	45-7/8	17 X 46 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy-gauge, galvanized steel.
- Coil connections: 1/2" CW on HH006, 3/4" on HH008-012 and 1/2" HW on HH006-12.

HIGH PERFORMANCE HORIZONTAL DELUXE

HH-D / 1,500 - 2,200 CFM

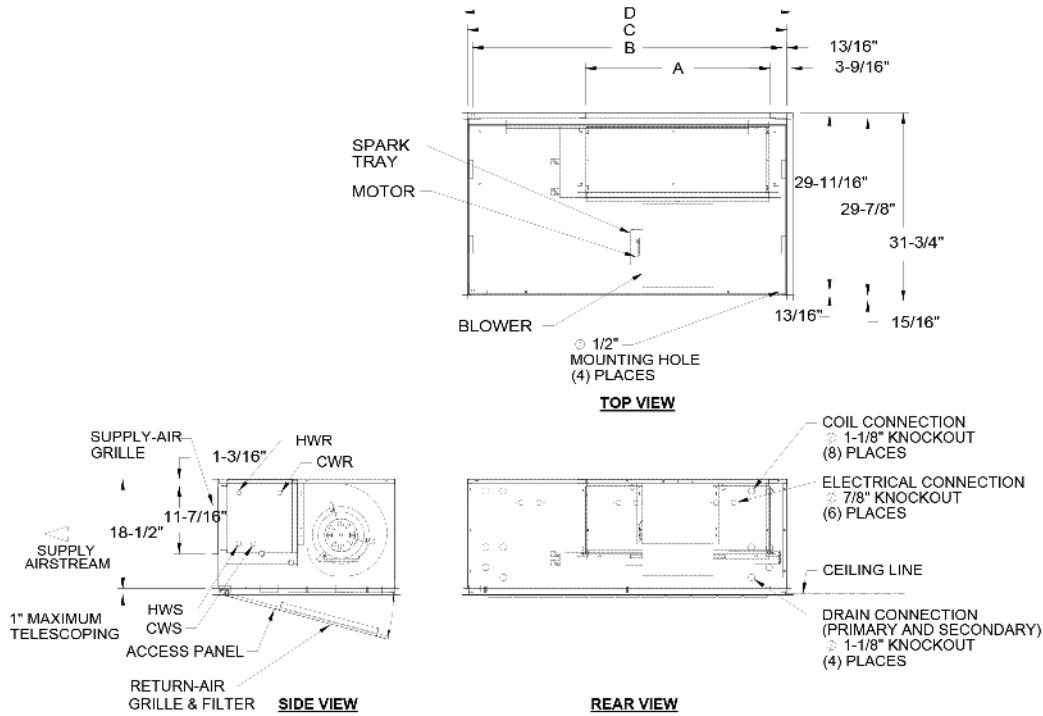


MODEL DELUXE	A	B	FILTER SIZE
1500	55	51-7/8	(1) 17 X 46 X 1
1800	61	57-7/8	(1) 17 X 52 X 1
2200	67	63-7/8	(1) 17 X 52 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022 and 1/2" HW on HH015-022.

HIGH PERFORMANCE HORIZONTAL FLUSH

HH-F / 600 - 1,200 CFM

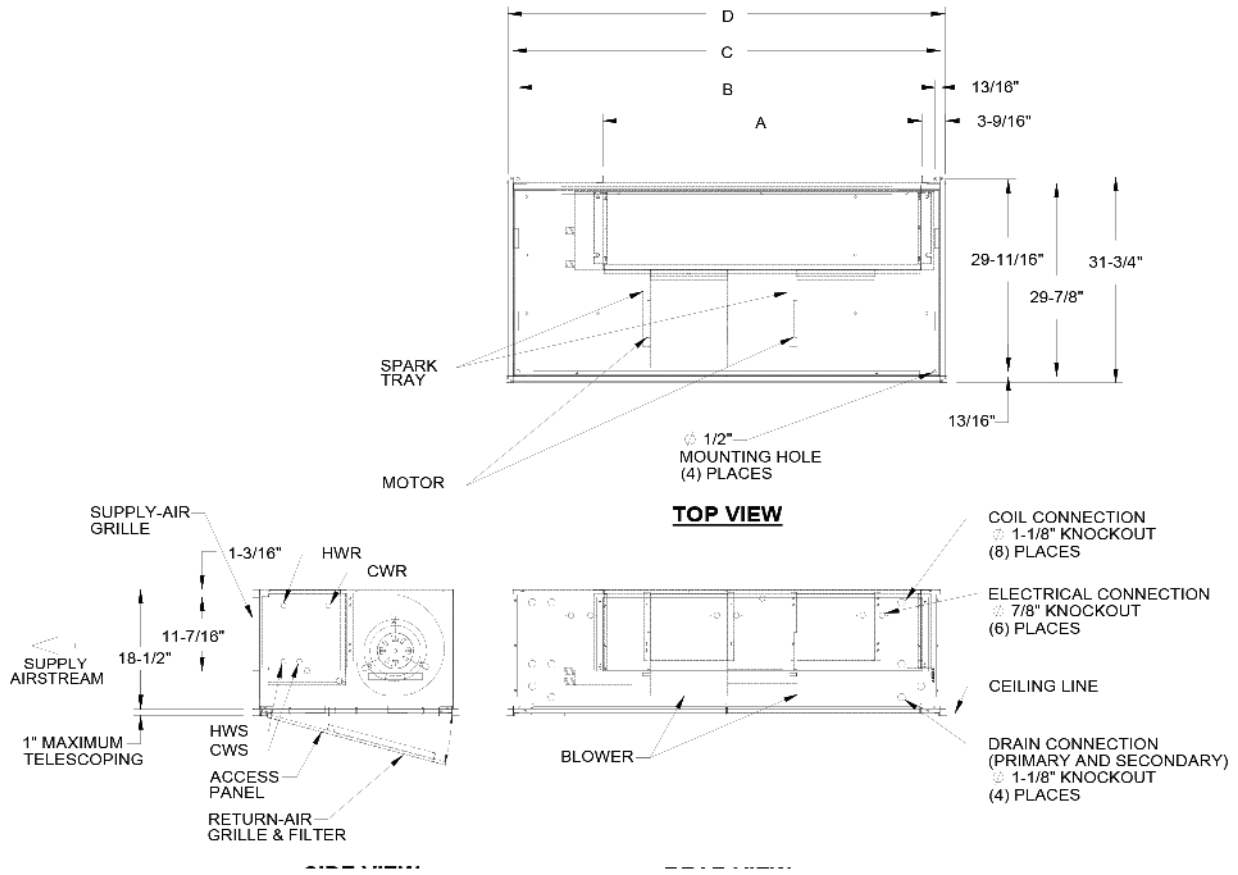


MODEL FLUSH	A	B	C	D	FILTER SIZE
600	15-5/16	44-3/8	46	47-1/2	(2) 12 X 20 X 1
800	19-5/16	44-3/8	46	47-1/2	(2) 12 X 20 X 1
1000	25-5/16	44-3/8	46	47-1/2	(2) 12 X 20 X 1
1200	31-5/16	52-3/8	54	55-1/2	(2) 12 X 25 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on HH006, 3/4" on HH008-012 and 1/2" HW on HH006-012.

HIGH PERFORMANCE HORIZONTAL FLUSH

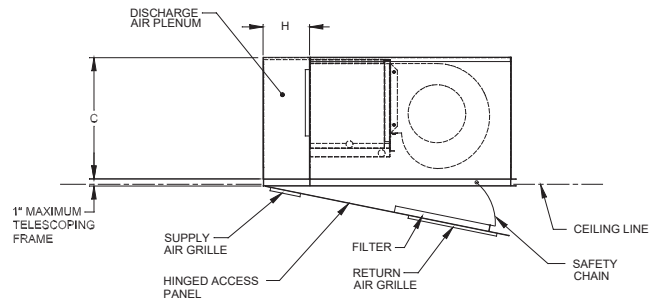
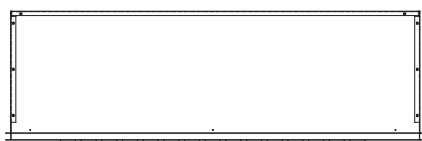
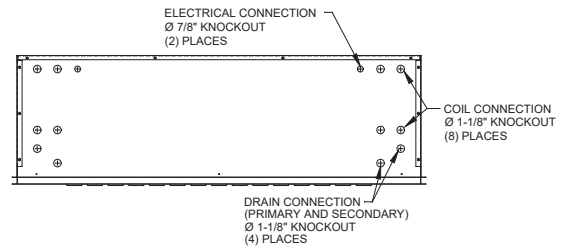
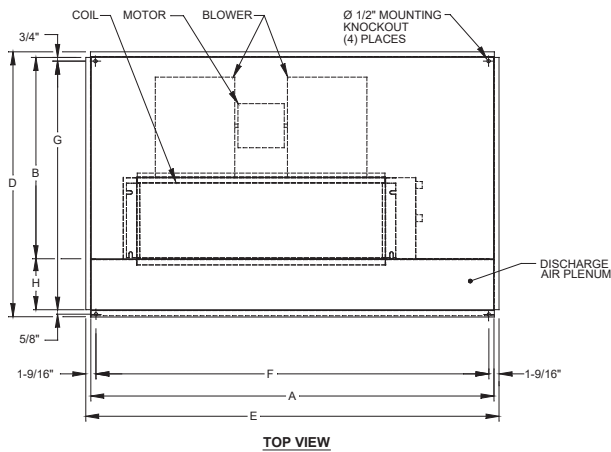
HH-F / 1,500 - 2,200 CFM



MODEL FLUSH	A	B	C	D	FILTER SIZE
1500	37-5/16	54-3/8	56	57-1/2	(2) 12 X 25 X 1
1800	43-5/16	58-3/8	60	61-1/2	(3) 12 X 20 X 1
2200	49-5/16	64-3/8	66	67-1/2	(3) 12 X 20 X 1

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022 and 1/2" HW on HH015-022.

HIGH PERFORMANCE DELUXE BOTTOM SUPPLY AND RETURN HH-E / 600 - 1,200 CFM

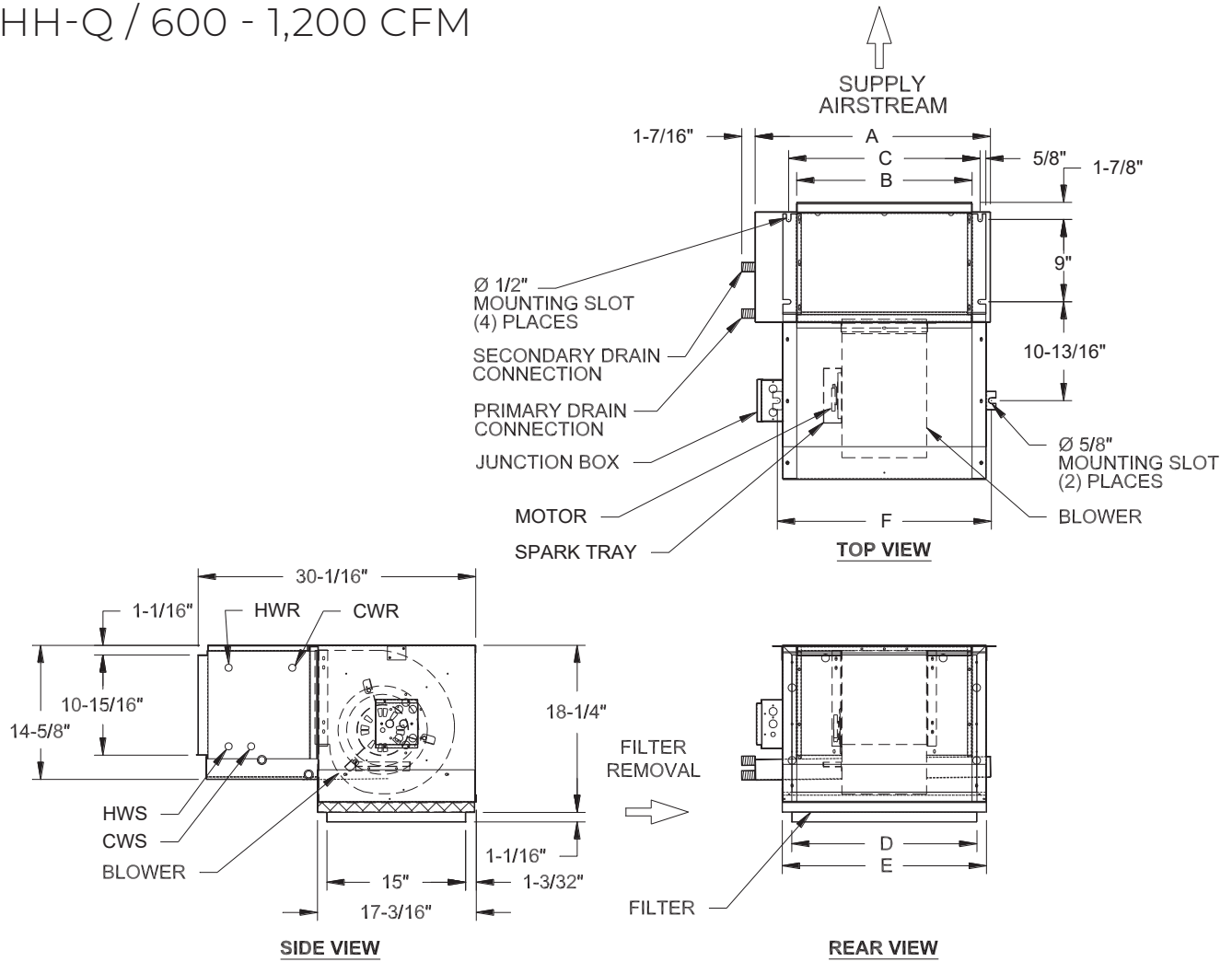


MODEL HH-Q	A	B	C	D	E	F	G	H	FILTER SIZE
600	54	25 7/8	11	39 3/8	55 3/8	52 1/4	37 1/8	12	12 x 25
800	54	25 7/8	12	45 3/8	55 3/8	52 1/4	43 1/8	18	12 x 25
1000	60	25 7/8	12	45 3/8	61 3/8	58 1/4	43 1/8	18	12 x 25
1200	60	25 7/8	12	45 3/8	61 3/8	58 1/4	43 1/8	18	12 x 25

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/4" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022 and, 1/2" HW on HH015-022.

HIGH PERFORMANCE HORIZONTAL WITH BOTTOM RETURN AIR PLENUM

HH-Q / 600 - 1,200 CFM

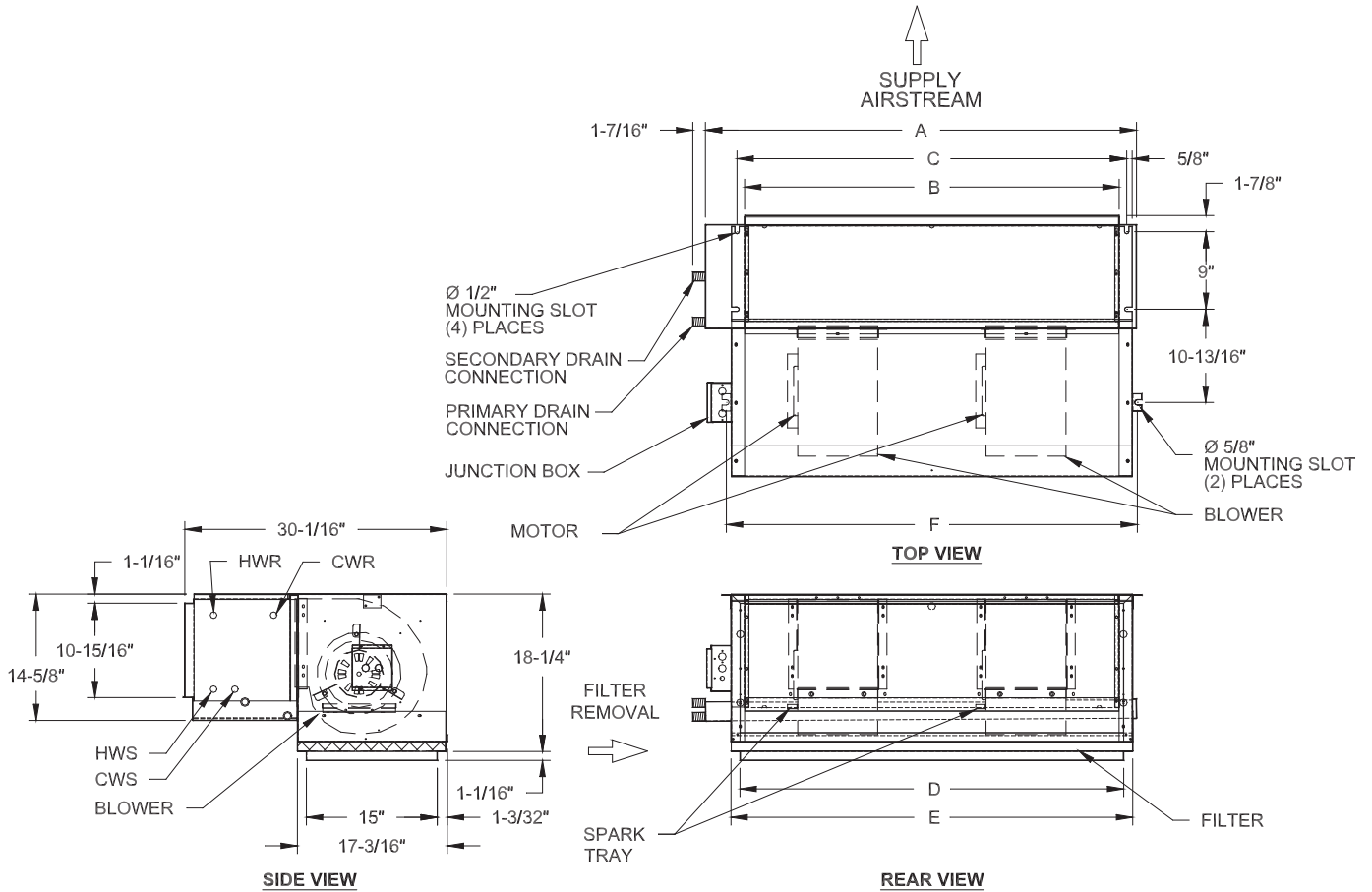


MODEL HH-Q	A	B	C	D	E	F	FILTER SIZE
600	21 1/2	15	16	16 1/16	19 3/16	19 3/8	17 x 18 x 1
800	25 1/2	19	20	20 1/16	23 3/16	23 3/8	17 x 22 x 1
1000	31 1/2	25	26	26 1/16	29 3/16	29 3/8	17 x 28 x 1
1200	37 1/2	31	32	32 1/16	35 3/16	35 3/8	17 x 34 x 1

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/4" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on HH006, 3/4" on HH008-012 and 1/2" HW on HH006-012.

HIGH PERFORMANCE HORIZONTAL WITH BOTTOM RETURN AIR PLENUM

HH-Q / 1,500 - 2,200 CFM



MODEL HH-Q	A	B	C	D	E	F	FILTER SIZE
1500	43 1/2	37	38 3/4	38 1/16	40 1/8	41 3/16	17 x 40 x 1
1800	49 1/2	43	44 3/4	44 1/16	46 1/8	47 3/16	17 x 46 x 1
2200	55 1/2	49	50 3/4	50 1/16	52 1/8	53 3/16	17 x 52 x 1

- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/4" thick closed cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 3/4" CW on HH015-022 and, 1/2" HW on HH015-022.

HIGH PERFORMANCE HORIZONTAL FAN COILS

CH-F SERIES

600 - 2,200 CFM

HORIZONTAL CASED FLUSH / CH-F

The Cased Flush Horizontal (CH-F) is a horizontally ducted fan coil that aligns flush with the ceiling. Ideal for horizontal applications in apartments, condominiums and motels requiring either a drop ceiling or soffit installation. The Cased Flush Horizontal has a swing down access panel for fast and easy filter removal and routine maintenance. Bottom return-air is standard, rear ducted is an option.



AHRI CERTIFIED COOLING CAPACITY

CH-F SERIES



Williams high performance horizontal fan coils are labeled and approved by the Air-Conditioning, Heating & Refrigeration Institute (AHRI). This designation signifies that Williams high performance vertical fan coil units have been rated as follows in accordance with the latest edition of ANSI/AHRI 440 with Addendum 1 Performance Rating of Room Fan Coils and subject to rating accuracy by AHRI sponsored, independent, third-party testing.

WATER TEMP RISE		8°F				10°F				12°F				14°F				16°F				18°F				20°F							
		Q	Q	G	W	Q	Q	G	W	Q	Q	G	W	Q	Q	G	W	Q	Q	G	W	Q	Q	G	W	Q	Q	G	W				
MODEL NO.	ROWS	T	S	M	D	T	S	M	D	T	S	M	D	T	S	M	D	T	S	M	D	T	S	M	D	T	S	M	D	T	S	M	D
CH004	3	14.8	10.5	3.7	4.8	12.3	9.5	2.5	2.3	10.2	8.5	1.7	1.2	10.1	8.5	1.4	0.9	8.6	7.7	1.1		7.5	7.0	.8	.4	6.8	6.5	0.7	0.3				
	4	17.6	11.9	4.4	6.0	15.7	11.1	3.1	3.2	13.2	10.0	2.2	1.7	10.7	9.0	1.5	0.9	10.9	9.1	1.4		9.8	8.5	1.1	.5	8.8	7.9	0.9	0.4				
CH006	3	19.8	14.5	4.9	8.1	16.3	13.1	3.3	3.8	13.2	11.6	2.2	1.9	11.0	10.8	1.7	1.2	11.3	10.5	1.4		9.7	9.3	1.1	.6	8.4	8.3	0.8	0.4				
	4	23.8	16.6	6.0	10.6	20.5	15.2	4.1	5.3	17.4	13.9	2.9	2.8	14.4	12.6	2.1	1.5	12.7	11.6	1.6		12.5	11.5	1.4	.8	11.4	10.7	1.1	0.6				
CH008	3	23.7	18.0	5.9	11.4	19.5	16.3	3.9	5.3	16.0	14.4	2.7	2.7	13.3	12.6	1.9	1.5	13.1	12.3	1.6		11.6	11.4	1.3	.8	9.8	9.8	1.0	0.5				
	4	29.0	20.8	7.2	15.4	24.6	19.0	4.9	7.4	21.1	17.5	3.5	4.0	17.0	16.0	2.6	2.2	14.6	14.0	1.8		13.8	13.3	1.5	.9	13.7	13.1	1.4	0.8				

Notes: 1) Based on 80°F DB and 67°F WB EAT, 40°F EWT, 10°F temperature rise, high fan speed. Motor voltage 115/1/60 power source. Air flow under dry coil conditions. Water pressure drops shown in feet of water. All units are listed under UL Category Control No. LZFE.

2) Ratings are based on actual CFM. Standard coils for 004 is 3 rows and 006-008 is 4 rows.

HEATING PERFORMANCE

CH-F SERIES

WATER TEMP RISE		10 ° F				20 ° F			
MODEL NO.	ROWS	QT	QS	GPM	WPD	QT	QS	GPM	WPD
CH004	1	23,014	23,014	4.6	11.5	20,961	20,961	2.1	3.4
	2	34,944	34,944	7.0	7.4	32,149	32,149	3.2	2.3
CH006	1	29,365	29,365	5.9	17.3	26,678	26,678	2.7	4.9
	2	46,883	46,883	9.4	11.9	42,893	42,893	4.3	3.5
CH008	1	34,467	34,467	6.9	22.8	31,252	31,252	3.1	6.2
	2	56,865	56,865	11.4	16.4	51,849	51,849	5.2	4.7

Note: Based on 70°F DB EAT, 180°F EWT.



COIL DATA

CH-F SERIES

Coils are made from ½" O.D. copper tubing with .016" wall thickness, and tubes are staggered for maximum heat transfer. A manual air vent is standard on all hydronic coils. DX and steam coils do not include manual air vent. All coils are 100% underwater pressure tested to 350 PSIG with a 300 PSIG working pressure. Steam coils are rated for up to 15 PSIG or 250°F.

Coils are available in two or four pipe, and from one to six row configurations for series units. All units available with any combination of chilled or hot water, steam or direct expansion. Custom circuiting is available.

COIL ROW	003	004	006	008	010	012	015	018	022
Single-Row Coil									
Two-Row Coil									
Three-Row Coil									
Four-Row Coil									
Five-Row Coil									
*Six-Row Coil									

STANDARD

OPTIONAL

COIL OPTIONS:

- DX – Includes distributor and nozzle, TXV must be field furnished and installed
- Steam – 1-15 PSIG
- Preheat Coil Position – Standard coil is reheat position
- Phenolic Anti-Corrosion Coating (PAC) custom.
- 10-15 Fins Per Inch (Standard is 12 FPI)

Coil connections on the chilled water side for CH004-006 is ½" and ¾" on CH008. The hot water connection is ½" on CH004-008.

ELECTRIC HEAT

CH-F SERIES

Electric heat may be furnished with either hydronic, direct expansion or steam coils and is factory mounted, wired, and tested. Option equipped with low watt density (for long life) nichrome wire elements. The heater has a built-in, high limit, and fusible link to provide maximum safety. Can only be installed in preheat position.

MODEL / SIZE	kW	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
	VOLTAGE	AMPS															
006	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2								
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4								
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4								
008	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
010	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
012	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
015	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
018	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9
022	115		8.7	13.0	17.4	21.7	26.1										
	208		4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.9	31.3	33.7	36.1	38.5
	230		4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7	23.9	26.1	28.3	30.4	32.6	34.8
	277		3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1	19.9	21.7	23.5	25.3	27.1	28.9

AIR FLOW DATA

CH-F SERIES

Air flow shown below is under dry coil conditions.

AIR FLOW DATA		EXTERNAL STATIC PRESSURE																	
MODEL	NORMAL CFM	0.00			0.05			0.10			0.15			0.20			0.25		
		HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW
CH04-F	400	470	400	320	450	370	300	430	350	270	405	330	250	390	310	225	360	290	210
CH06-F	600	620	580	520	600	550	490	560	520	470	530	500	450	510	480	420	490	450	400
CH08-F	800	770	660	540	620	600	500	580	550	490	550	520	470	530	500	440	500	480	420

AIR FLOW DATA		EXTERNAL STATIC PRESSURE														
MODEL	NORMAL CFM	0.30			0.35			0.40			0.45			0.50		
		HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW	HI	MED	LOW
CH04-F	400	340	265	190	315	240	185	290	210	180	260	205	175	245	190	170
CH06-F	600	460	420	360	430	380	320	380	330	300	340	300	250	300	270	230
CH08-F	800	480	440	380	450	400	360	400	350	320	360	320	270	310	290	250



MOTOR DATA

CH-F SERIES

Motors are wired to a junction box ready for single point field connection.

OUTSTANDING MOTOR FEATURES:

- Quick connect plug
- Permanent split capacitor
- Thermal overload protection
- 1050 RPM for lower operating costs
- Oversized bearings and permanently lubricated and sealed
- 122°F maximum operating temperature
- Custom motor mounts designed to reduce noise and eliminate vibration
- Stators are epoxy dipped for more efficient motor cooling

OPTIONAL MOTORS:

- 208V-1Ø-60 motors
- 277V-1Ø-60 motors
- 230/220V-1Ø-60 motors
- 50-Hz motors in specified voltages

HORIZONTAL CH SERIES

60 HERTZ SINGLE-PHASE MOTORS (1100 RPM)				VOLTAGE / WATTS							
				115V		208V		230V		277V	
SIZE	MODEL / MOTOR TYPE	HP (QTY)	BLOWERS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
006	CH SERIES	1/6 (1)	1	2.2	280	1.10	280	1.0	280	0.8	280
008	CH SERIES	1/4 (1)	1	3.2	330	1.70	330	1.5	330	1.2	330
010	CH SERIES	1/4 (1)	1	3.2	378	1.60	378	1.5	378	1.2	378
012	CH SERIES	1/3 (1)	1	4.5	403	2.60	403	2.4	403	1.8	400
015*	CH SERIES	1/6 (2)	2	4.6	560	2.20	560	2.0	560	1.6	560
018*	CH SERIES	1/4 (2)	2	6.4	660	3.30	660	3.0	660	2.4	660
022*	CH SERIES	1/3 (2)	2	9.0	806	5.20	806	4.8	806	3.6	806

* Data reflects combined performance of (2) motors. Notes: Motor full load amps listed refer to NEC amps. Actual motor nameplate amps may vary.

SOUND DATA

CH-F SERIES

SIZE	MODEL	FAN SPEED	OCTAVE BAND						
			2	3	4	5	6	7	8
			CENTER FREQUENCY (CPS)						
			125	250	500	1000	2000	4000	8000
004	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
006	HH series	high	60.0	61.0	55.0	54.0	50.5	46.0	36.5
		medium	54.0	56.0	49.0	46.0	41.0	35.0	24.0
008	HH series	high	61.0	63.0	56.0	55.0	52.0	47.0	38.0
		medium	57.0	58.0	50.0	47.0	43.0	36.0	24.5

- Notes:** 1) Power levels are in dB RE 10-12 watts.
 2) Sound data tested in accordance with ASHRAE standard 68 and AHRI standard 260 and 350.
 3) Air flow under dry coil conditions.

WEIGHTS AND MEASUREMENTS

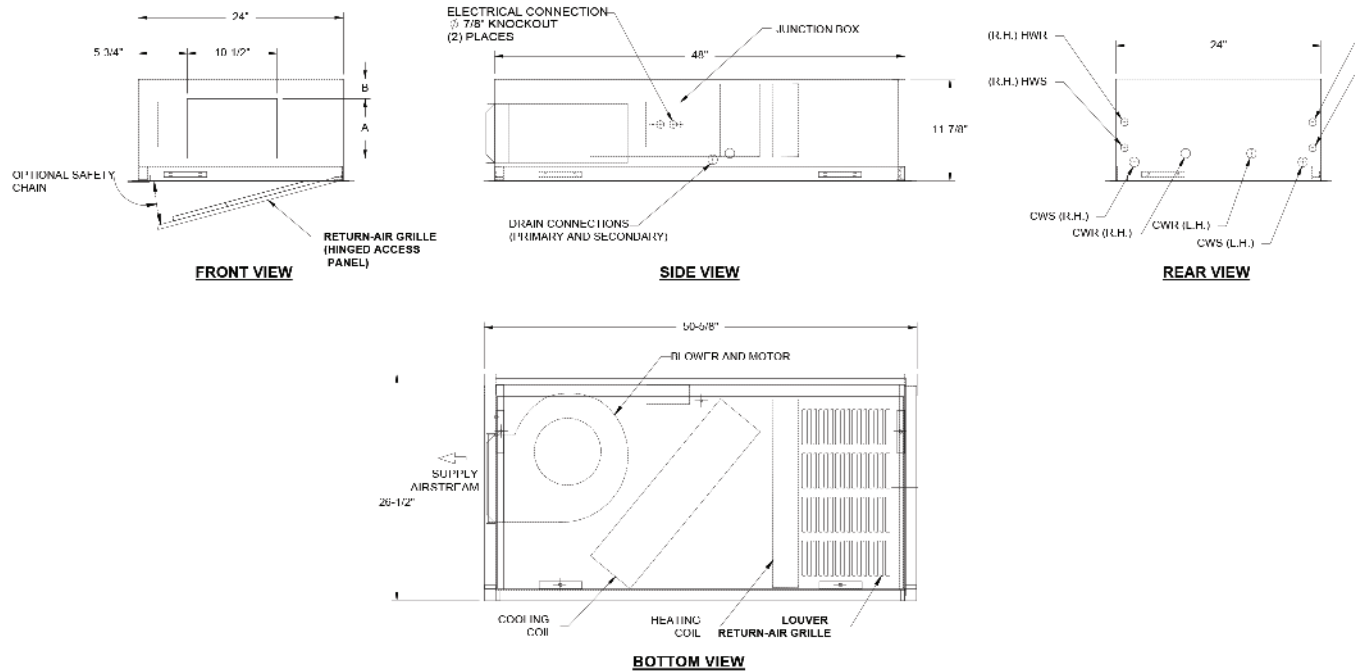
CH-F SERIES

The following CH Series weights and measures are based on fan coil units only. Add approximately 20% for packaging and crating.

MODEL	DIMENSIONS - INCHES				DIMENSIONS - MILLIMETERS			
	HEIGHT	WIDTH	DEPTH	POUND	HEIGHT	WIDTH	DEPTH	KILOGRAMS
CH004	12	27	51	180	686	1296	1286	82
CH006	12	27	51	180	686	1296	1286	82
CH008	12	27	51	180	686	1296	1286	82

CASED FLUSH HORIZONTAL

CH-F/400 - 800 CFM



MODEL CASED FLUSH	A	B	FILTER SIZE
400	7	2	12 X 20
600	8-3/8	2-11/16	12 X 20
800	8-3/8	2-11/16	12 X 20

- All sizes shown in inches.
- Right hand unit shown, left hand unit opposite.
- Coil connections determined by facing the supply air opening.
- Electrical junction box is located on the same side as the coil connections.
- Unit must be installed level and condensate drain lines should be trapped.
- Drain pan is powder coated epoxy with a 1/8" thick closed-cell insulation and has 3/4" NPT primary and secondary drain connections.
- Entire cabinet, scroll and blower wheel are heavy gauge, galvanized steel.
- Coil connections: 1/2" CW on CH004-006, 3/4" on CH008. 1/2" HW on CH004-008.

GENERAL INFORMATION

Furnish and install Williams LH/HH/CH Series Horizontal Direct Drive fan coil units as indicated on the plans and in the specifications. All units shall be completely factory assembled, tested and shipped as one working unit. All units shall be capable of meeting or exceeding the scheduled capacities for cooling, heating and air delivery. Dimensions for each model and size shall be considered maximums. Units shall be UL listed and also in compliance with UL/ANSI Standard 1995, and be certified as complying with the latest edition of AHRI Standard 440.

CONSTRUCTION

All unit chassis shall be fabricated of heavy gauge galvanized steel panels able to meet 125 hour salt spray test per ASTM B-117. All exterior panels shall be insulated with 1/2" thick, 3.35 pound per cubic foot, dual density fiberglass insulation rated for a maximum air velocity of 3600 f.p.m. Insulation shall conform to UL 181 for erosion and NFPA 90A and 90B for flame spread (25) and smoke developed (50) rating per ASTM E-84 and UL 723 and CAN./ULC, S102-M88.

All concealed units shall have a minimum 1" duct collar on the discharge. Plenum units shall have a minimum 1" duct collar on the return.

All exposed units shall have exterior panels fabricated of cold rolled steel.

OPTION: Provide foil faced insulation in lieu of standard. Foil insulation shall meet or exceed the requirements stated above, and in addition, meet ASTM Standards C665 and C-1136 for biological growth in insulation. Insulation shall be lined with aluminum foil, fiberglass scrim reinforcement, and 30 pound kraft paper laminated together with a flame resistant adhesive. All exposed edges shall be sealed to prevent any fibers from reaching the air stream.

OPTION: Provide elastomeric closed cell foam insulation in lieu of standard. Insulation shall conform to UL 181 for erosion and NFPA 90A for fire, smoke and melting, and comply with a 25/50 flame spread and smoke developed Index per ASTM E-84 or UL 723. Additionally, insulation shall comply with antimicrobial performance rating of zero, no observed growth, per ASTM G21. Polyethylene insulation is not acceptable.

OPTION: For exposed units, the bottom access panels

shall be attached with quick open fasteners to allow for easy removal and access for service.

OPTION: For exposed units, provide double deflection discharge grille and either a rear return or bottom return single deflection grille. Supply and return duct connections are available.

Unit mounting shall be by hanger and slotted hanging brackets provided at four locations. For easy installation, exposed units provided with 1/2" mounting knockouts in four places.

PAINTED FINISH

All exposed cabinet exterior panels shall be provided with soft white powder coated epoxy finish and subjected to a 1500 hour salt spray test in accordance with ASTM B117.

SOUND

Units shall have published sound power level data tested in accordance with AHRI Standard 350-2000 (non-ducted equipment) and AHRI Standard 260-2001 (ducted equipment).

FAN ASSEMBLY

Unit fan shall be a dynamically balanced, forwardly curved, DWDI centrifugal type constructed of heavy gauge zinc coated galvanized steel for corrosion resistance. Motors shall be high efficiency, permanently lubricated sleeve bearing, permanent split capacitor type with UL and C-UL listed automatic reset thermal overload protection and three separate horsepower taps. Single speed motors are not acceptable.

The fan assembly shall be easily removable for servicing the motor and blower at or away from the unit. The entire fan assembly shall be able to come out of the unit by removing two wing nuts and unplugging the motor.

Plenum unit fan assemblies shall be easily serviced through an access panel provided.

OPTION: Devices used to energize and de-energize (switch) fan speeds must be totally silent. Mercury

and/or quiet relays and/or contactors are not acceptable.

COILS

All cooling and heating coils shall optimize rows and fins per inch to meet the specified capacity. Coils shall have seamless copper tubes and shall be mechanically expanded to provide an efficient, permanent bond between the tube and fin. Fins shall have high efficiency aluminum surface optimized for heat transfer, air pressure drop and carryover.

All coils shall be hydrostatically tested at 350 PSIG air pressure under water, and rated for a maximum of 300 PSIG working pressure at 200°F maximum water temperature. Direct expansion cooling coils shall include a fixed orifice distributor and nozzle.

Steam coils shall be standard steam type suitable for temperatures above 35°F and 15 PSIG maximum working pressure.

OPTION: Coil casing shall be fabricated from 304 stainless steel. All coils shall be provided with a manual air vent fitting to allow for coil venting.

OPTION: Provide automatic air vents in lieu of manual air vents.

Cooling and heating coils shall be in the common coil casing, heating coils shall be furnished in the re-heat or pre-heat position on the unit with chilled water coils, and DX heating coil shall be in pre-heat position only.

DRAIN PANS

Primary condensate drain pans shall be single wall, heavy gauge, powder-coated epoxy subjected to a 650 hour salt spray test in accordance with ASTM B117, and shall extend under the entire cooling coil. Drain pans shall be of one piece construction and be positively sloped for condensate removal. Drain pans shall have primary and secondary drain connections.

The drain pan shall be externally insulated with a closed cell foam insulation. The insulation shall carry no more than a 25/50 Flame Spread and Smoke Developed Rating per ASTM E-84 and UL 723 and fungi resistant per ASTM G21/C1338, bacteria resistant per ASTM G22 and mold growth per UL 181.

OPTION: Provide a single wall primary drain pan

constructed entirely of heavy gauge type 304 stainless steel for superior corrosion resistance. Stainless steel drain pans shall be externally insulated and meet or exceed the requirements stated above.

Provide a secondary drain connection on the primary drain pan for condensate overflow.

OPTION: Provide a condensate overflow switch in the primary drain pan for condensate overflow.

FILTERS

All plenum and exposed units shall be furnished with a minimum 1" nominal glass fiber throwaway filter. Filters shall be tight fitting to prevent air bypass. Plenum and exposed unit filters shall be easily removable from the bottom or rear of the unit without the need for tools.

OPTION: Provide unit with 2" pleated filters rated at 25-30% efficiency and MERV 6 based on ASHRAE 52.2 - 1999 Electrical (Option)

ELECTRICAL

Units shall be furnished with single point power connection. Provide an electrical junction box with terminal strip for motor and other electrical terminations.

OPTION: The factory mounted terminal wiring strip consists of a multiple position screw terminal block to facilitate wiring terminations for the electric control valves and thermostats.

ELECTRIC HEAT

Furnish an electric resistance heating assembly as an integral part of the fan coil unit, with the heating capacity, voltage and kilowatts scheduled. The heater assembly shall be designed and rated for installation on the fan coil unit without the use of duct extensions or transitions, and be located in the unit as to not expose the fan assembly to excessive leaving air temperatures that could affect motor performance.

The heater and unit assembly shall be listed for zero clearance and meet all NEC requirements, and be UL listed with the unit as an assembly in compliance with UL/ANSI Standard 1995.

All heating elements shall be open coil type Nichrome wire mounted in ceramic insulators and located in an insulated heavy gauge galvanized steel housing. All elements shall terminate in a machine staked stainless steel terminal secured with stainless steel hardware for corrosion resistance. The element support brackets shall be spaced no greater than 3-1/2" on center. All internal wiring shall be rated for 105°C minimum.

All heaters shall include over temperature protection consisting of an automatic reset primary thermal limit and back up secondary thermal limit. All heaters shall be single stage.

An incoming line power distribution block shall be provided and designated to accept single point power wiring capable of carrying 125% of the calculated load current.

OPTION: Devices used to energize and de-energize (switch) electric heat must be totally silent. Mercury and/or quiet relays and/or contactors are not acceptable.

PIPING PACKAGES (OPTION)

Provide a factory assembled valve piping package to consist of a 2 or 3 way, on/off, motorized electric control valve and two ball isolation valves. Control valves are piped normally closed to the coil. Maximum entering water temperature on the control valve is 180°F, and maximum close-off pressure is 75 PSIG (1/2") or 50 PSIG (3/4"). Maximum operating pressure shall be 300 PSIG.

OPTION: Provide 3 wire floating point modulating control valve in lieu of standard 2 position control valve with factory assembled valve piping package.

OPTION: Provide either a fixed or adjustable flow control device for each piping package.

OPTION: Provide pressure temperature ports for each piping package.

Piping packages are shipped installed on all units and can be shipped separately by request only.

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