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ARI Certified

Airtherm Hi-Performance fan coils are labeled and approved by the Air Conditioning and Refrigeration Institute (ARI). This designation signifies that Airtherm Superior Performance fan coil units have been examined by ARI and comply with the organization's applicable standards.



UL Listing

Airtherm Hi-Performance fan coils are listed by Underwriters Laboratories, Inc. (UL). The UL listing ensures that Airtherm Hi-Performance fan coil units have been examined by UL and comply with the organization's applicable standards. UL's re-examination service includes periodic visits by UL inspectors to Airtherms' factory to ensure continued compliance for all listed products.



C-UL US Listing

Hi-P (ULC). The C-UL US listing ensures that Airtherm Hi-Performance fan coil units have been examined by UL and are in compliance with both the U.S. and Canadian organizations' applicable standards.

Materials and equipment acceptance for use by the New York Department of Buildings:

SV004-008, SV006-022
SV004-022

MEA 411-05-E
MEA 409-05-E

Applied Products

...more than just fan coils.



For 90 years, Airtherm has been a market leader in providing high quality HVAC products for residential and commercial buildings. Today, the Applied



Products Group continues the proud tradition by offer-

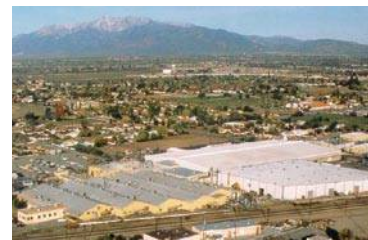
ing to the commercial/industrial market more configurations and size options of quality fan coils and blower coils/air handlers than any other HVAC company in North America.

The Applied Products Group, based in Oklahoma City, Oklahoma, serves all US and overseas markets with complete application engineering, sales, marketing and administrative services.

Served by company factories in Colton, California and Phoenix, Arizona, the Applied Products Group uses the resources of nearly 600,000 square feet of manufacturing and warehouse facilities to provide high quality products to some of the most discriminating customers in the world.

The Applied Products Group

pledge is to provide complete, high quality and timely support for the success-



ful completion of your construction projects involving engineered products offered by Airtherm. We believe in a partnering attitude that creates superior projects and high levels of satisfaction.

400 - 2200 CFM



SVTB



SDTB



SCTF

SVTB - Vertical Basic

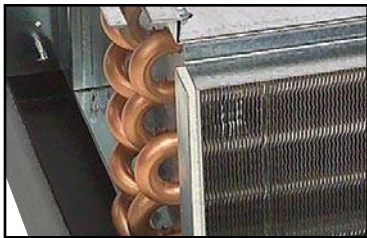
The Vertical Basic (SVTB) is a high static, ducted vertical cased fan coil with bottom return. Primarily used in vertical floor-mounted or hideaway applications, the Vertical Basic is furred into partition walls or hidden in closets, utility rooms and other concealed locations with a ducted discharge. A removable front access panel facilitates easy servicing. A one-inch discharge duct flange is standard on the top panel of each unit. Front Return Basic also available.

SDTB - Vertical Deluxe

The Vertical Deluxe (SDTB) is our Basic model primarily used in floor-mounted or exposed applications. The Vertical Deluxe is finished in a soft white, powder coat epoxy and subjected to a 1500-hour salt spray test in accordance with ASTM B117. Front Return Deluxe is also available.

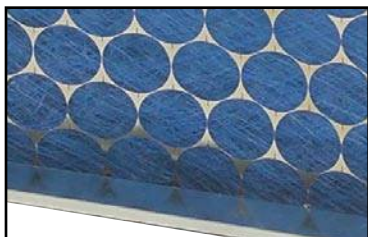
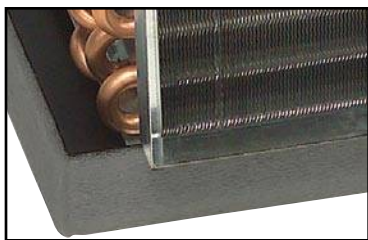
SCTF - Vertical Front Return

The Vertical Front Return (SCTF) is a high static, ducted vertical fan coil for installation in a closet-type enclosure. The front panel is removable for easy service access to the slide-out blower assembly, with quick-connect plug. Vertical Front Return with return-air grille option allows unit to be furred-in. Grille mounts to drywall for easy access without the expense of a closet door. Vertical Front Return Deluxe also available.



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 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.
- UL and C-UL approved, ARI certified and 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 (solid or perforated) in 1/2" and 1" thicknesses.
- Coils - copper fins/tubes, stainless steel fins/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.
- Cabinet - Deluxe, Flush and custom colors.
- Controls - wide selection of factory-mounted valves and controls.
- Filters - two-inch thick throwaway, washable and metallic.
- Flow-control circulator for water heating applications.
- Grilles available as double-deflection and in custom colors.
- Electric Strip Heat from 0.5 to 5 kW.



ARI Certified Cooling Capacity

Airtherm SV Series Hi-Performance Vertical fan coils have been rated in accordance with ARI Standard 440-2005 for room fan-coils air-conditioners and are certified by the Air-Conditioning and Refrigeration Institute to meet the following product performance ratings:

ARI APPROVED STANDARD RATINGS						COOLING CAPACITY		POWER INPUT (WATTS)
SIZE	SERIES / MOTOR TYPE / #	STYLE	RATED CFM	GPM	WPD (FT./H ₂ O)	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	
004	SV Series Standard (1)	B, D	530	3.2	2.1	15,930	11,690	175
		F, R	550	2.9	4.3	14,260	11,040	228
		G, Q	660	3.5	1.6	17,330	13,630	227
006	SV Series Standard (1)	B, D	600	3.5	2.4	17,540	13,130	181
		F, R	750	3.5	6.4	17,460	14,410	260
		G, Q	800	4.0	2.0	20,030	16,200	256
008	SV Series Standard (1)	B, D	760	4.2	3.1	20,820	17,190	316
		F, R	960	4.8	3.5	24,080	19,570	360
		G, Q	890	4.3	2.2	21,550	17,730	360
010	SV Series Standard (1)	B, D	900	4.9	4.6	24,650	20,290	356
		F, R	1,060	5.7	5.3	28,480	23,560	383
		G, Q	1,080	6.2	4.4	31,080	24,950	398
012	SV Series Standard (1)	B, D	970	5.2	5.0	25,990	21,580	413
		F, R	1,310	7.8	8.8	39,100	30,780	540
		G, Q	1,280	6.9	5.1	34,680	26,470	536
015	SV Series Standard (2)	B, D	1,616	10.0	5.1	49,865	40,095	529
		F, R	1,550	9.7	7.9	48,624	37,500	553
		G, Q	1,602	9.9	5.6	49,500	39,796	529
018	SV Series Standard (2)	B, D	1,898	12.4	7.0	62,141	48,454	736
		F, R	1,898	13.0	10.9	65,009	49,559	736
		G, Q	1,864	12.3	6.9	61,440	47,756	736
022	SV Series Standard (2)	B, D	2,075	14.4	8.8	71,879	54,529	1035
		F, R	2,075	14.4	8.8	71,879	54,529	1035
		G, Q	2,088	13.4	5.6	66,915	52,774	1035

- 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 004 is 3 rows and 006-022 is 4 rows.
 - 3) Legend - B = SVTB; D = SDTB; F = SCTF; R = Front return deluxe; G = Rear return and bottom supply; Q = Rear return and bottom supply deluxe.

Heating Performance

Heating Performance						
SIZE	SERIES / MODEL	COIL ROWS/ (FPI)	RATED CFM	MBH	GPM	WPD (FT./H ₂ O)
004	SV Series (Basic / Deluxe)	1 Row (12)	525	26.7	1.3	1.8
		2 Rows (12)	525	40.1	2.0	1.3
006	SV Series (Basic / Deluxe)	1 Row (12)	610	33.6	1.7	2.9
		2 Rows (12)	610	49.9	2.5	2.1
	SV Series (Front Return)	1 Row (12)	750	37.8	1.9	3.3
		2 Rows (12)	750	57.3	2.8	2.4
008	SV Series (Basic / Deluxe)	1 Row (12)	780	35.3	1.8	2.7
		2 Rows (12)	780	55.3	2.7	2.0
	SV Series (Front Return)	1 Row (12)	975	38.7	1.9	3.1
		2 Rows (12)	975	62.3	3.1	2.3
010	SV Series (Basic / Deluxe)	1 Row (12)	930	36.4	1.8	3.3
		2 Rows (12)	930	59.1	2.9	2.5
	SV Series (Front Return)	1 Row (12)	1,100	39.0	1.9	3.7
		2 Rows (12)	1,100	64.4	3.2	2.8
012	SV Series (Basic / Deluxe)	1 Row (12)	1,135	43.2	2.2	4.9
		2 Rows (12)	1,135	70.7	3.5	3.7
	SV Series (Front Return)	1 Row (12)	1,350	38.5	1.9	0.7
		2 Rows (12)	1,350	69.3	3.4	1.2
015	SV Series (Basic / Deluxe)	1 Row (12)	1,625	62.8	3.1	4.0
		2 Rows (12)	1,625	100.9	5.0	3.4
	SV Series (Front Return)	1 Row (12)	1,625	62.8	3.1	5.2
		2 Rows (12)	1,625	103.7	5.2	5.4
018	SV Series (Basic / Deluxe)	1 Row (12)	1,910	75.5	3.8	5.4
		2 Rows (12)	1,910	121.5	6.0	4.5
	SV Series (Front Return)	1 Row (12)	1,910	54.2	2.6	0.9
		2 Rows (12)	1,910	124.2	6.2	7.0
022	SV Series (Basic / Deluxe)	1 Row (12)	2,090	86.8	4.3	6.8
		2 Rows (12)	2,090	138.8	6.9	5.7
	SV Series (Front Return)	1 Row (12)	2,090	63.9	3.2	1.2
		2 Rows (12)	2,090	138.8	6.9	5.7

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.

Coil Data

Coils are made from 1/2" 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 eight-row configurations for SPCV Series units. All units available with any combination of chilled or hot water, steam or direct expansion. Custom circuiting is available.

Vertical SV Coil

Coil Rows	004	006	008	010	012	015	018	022
Single-Row Coil	S T A N D A R D							
Two-Row Coil								
Three-Row Coil								
Four-Row Coil	O P T I O N A L							
Five-Row Coil								
Six-Row Coil								
Seven-Row Coil								
*Eight-Row Coil								

* Seven-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
- Opposite End Connection (E). Place the “E” - pipe-hand connection in the eleventh digit of the model number - when ordering
- Preheat Coil Position (PREHEAT) – Standard coil is reheat position
- Phenolic Anti-Corrosion Coating (PAC)
 - Stainless Steel Tubes/Fins/End Plates
- Copper Fins/Tubes/End Plates
 - 6-16 Fins Per Inch (Standard is 12 FPI)

Coil connections on the chilled water side for SV004-SV006 is 1/2" and 3/4" on SV008-022. The hot water connection is 1/2" on the SV004-022.

Electric Heat

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.

Vertical (SV Series)

Size	kW	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	8.5	9.0	
	Voltage	AMPS																	
004	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											
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	21.6	24.0									
	230	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7									
	277	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1									
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									
	230	4.4	6.5	8.7	10.9	13.0	15.2	17.4	19.6	21.7									
	277	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.3	18.1									
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	40.9	43.3	
	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	37.0	39.1	
	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	30.7	32.5	
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	40.9	43.3	
	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	37.0	39.1	
	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	30.7	32.5	
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	40.9	43.3	
	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	37.0	39.1	
	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	30.7	32.5	
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	40.9	43.3	
	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	37.0	39.1	
	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	30.7	32.5	

Air Flow Data

Air flow shown below is under dry coil conditions.

Vertical (SV Series)

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
004 Basic / Deluxe	SV Series (Standard)	3 ROW	545	440	355	525	425	350	510	415	340	500	405	325	490	395	310	480	380	295
		4 ROW	535	430	345	515	415	340	500	405	340	90	395	315	480	385	300	470	370	285
006 Basic / Deluxe	SV Series (Standard)	3 ROW	624	490	380	600	470	360	585	555	340	570	440	335	560	425	310	545	410	295
		4 ROW	614	480	370	590	460	350	575	545	330	560	430	315	550	415	300	535	400	285
006 Front Return	SV Series (Standard)	3 ROW	765	650	560	735	635	550	715	620	540	695	605	525	675	585	510	655	565	495
		4 ROW	755	640	550	725	625	540	705	610	530	685	595	515	665	575	500	645	555	485
008 Basic / Deluxe	SV Series (Standard)	3 ROW	790	620	515	775	610	505	765	600	500	745	590	490	725	575	485	705	560	465
		4 ROW	775	605	500	765	595	490	750	585	485	730	575	480	710	560	470	690	545	450
008 Front Return	SV Series (Standard)	3 ROW	985	875	685	970	845	675	950	825	660	925	805	645	900	785	630	875	765	615
		4 ROW	970	860	670	960	830	660	935	810	645	910	790	630	885	770	615	860	750	600
010 Basic / Deluxe	SV Series (Standard)	3 ROW	935	715	555	920	705	550	905	695	545	890	685	535	865	675	525	835	655	510
		4 ROW	920	700	540	905	690	535	890	680	530	875	670	520	850	660	510	820	640	495
010 Front Return	SV Series (Standard)	3 ROW	1110	980	800	1075	950	785	1045	920	765	1010	895	745	975	865	725	940	835	700
		4 ROW	1095	965	785	1060	935	770	1030	910	750	1000	880	730	960	850	710	925	820	685
012 Basic / Deluxe	SV Series (Standard)	3 ROW	1145	935	715	1125	920	705	1095	905	695	1065	885	685	1030	865	675	1005	835	655
		4 ROW	1130	920	700	1110	905	690	1080	890	680	1050	870	670	1020	850	660	990	820	640
012 Front Return	SV Series (Standard)	3 ROW	1370	1125	645	1330	1115	635	1295	1100	630	1255	1085	625	1215	1065	620	1185	1050	610
		4 ROW	1355	1110	630	1315	1100	625	1280	1085	615	1240	1070	610	1200	1055	605	1170	1040	595
015 Front Return	SV Series (Standard)	3 ROW	1640	1345	1160	1600	1325	1140	1560	1305	1120	1520	1280	1100	1480	1250	1080	1435	1215	1040
		4 ROW	1620	1325	1140	1580	1305	1120	1540	1285	1100	1500	1260	1080	1460	1230	1060	1415	1200	1020
018 Front Return	SV Series (Standard)	3 ROW	1920	1770	1535	1870	1730	1500	1815	1670	1450	1760	1610	1410	1690	1560	1360	1630	1510	1300
		4 ROW	1900	1750	1515	1850	1710	1480	1795	1650	1430	1740	1590	1390	1670	1540	1340	1610	1490	1285
022 Front Return	SV Series (Standard)	3 ROW	2120	2000	1410	2035	1940	1390	1950	1870	1370	1890	1790	1335	1815	1725	1290	1750	1660	1240
		4 ROW	2100	1980	1390	2015	1920	1370	1930	1850	1350	1870	1770	1315	1795	1705	1270	1730	1640	1220

Notes: Ratings and capacity tables based on nominal CFM.

Motor Data

Motors are wired to a junction box ready for single-point field connection. Outstanding features include:

- 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

Vertical (SV Series)

Motors (1100 RPM)				115V		208V		230V		277V	
Size	Series / Model / Motor Type	HP (Qty)	Blowers	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
004	SV Front Return (Std)	1/10 (1)	1	1.4	228	0.70	228	0.6	228	0.5	228
	SV Basic/Deluxe (Std)	1/10 (1)	1	1.6	181	0.90	181	0.8	181	0.8	181
006	SV Front Return (Std)	1/6 (1)	1	2.3	260	1.20	260	1.1	260	0.8	260
	SV Basic/Deluxe (Std)	1/6 (1)	1	2.2	316	1.10	316	1.0	316	1.3	316
008	SV Front Return (Std)	1/4 (1)	1	3.2	360	1.60	360	1.5	360	1.2	360
	SV Basic/Deluxe (Std)	1/4 (1)	1	3.2	413	1.70	413	1.5	413	1.7	413
010	SV Front Return (Std)	1/3 (1)	1	4.5	540	2.60	540	2.4	540	1.8	540
	SV Basic/Deluxe (Std)	1/3 (1)	1	4.5	540	2.60	540	2.4	540	1.8	540
012	SV Front Return (Std)	1/2 (1)	1	5.4	644	3.00	644	2.8	644	2.1	644
	SV Basic/Deluxe (Std)	1/2 (1)	1	5.4	644	3.00	644	2.8	644	2.1	644
015*	SV Front Return (Std)	3/4 (1)	1	6.4	654	3.30	654	3.0	654	2.4	654
	SV Basic/Deluxe (Std)	3/4 (1)	1	6.4	654	3.30	654	3.0	654	2.4	654
018*	SV Front Return (Std)	1 (1)	1	9.0	793	4.80	793	4.8	793	3.6	793
	SV Basic/Deluxe (Std)	1 (1)	1	9.0	793	4.80	793	4.8	793	3.6	793
022*	SV Front Return (Std)	1 1/2 (1)	1	10.8	900	5.40	900	5.4	900	4.0	900
	SV Basic/Deluxe (Std)	1 1/2 (1)	1	10.8	900	5.40	900	5.4	900	4.0	900

* Data reflects combined performance of (2) motors for both Horizontal and Vertical units.

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

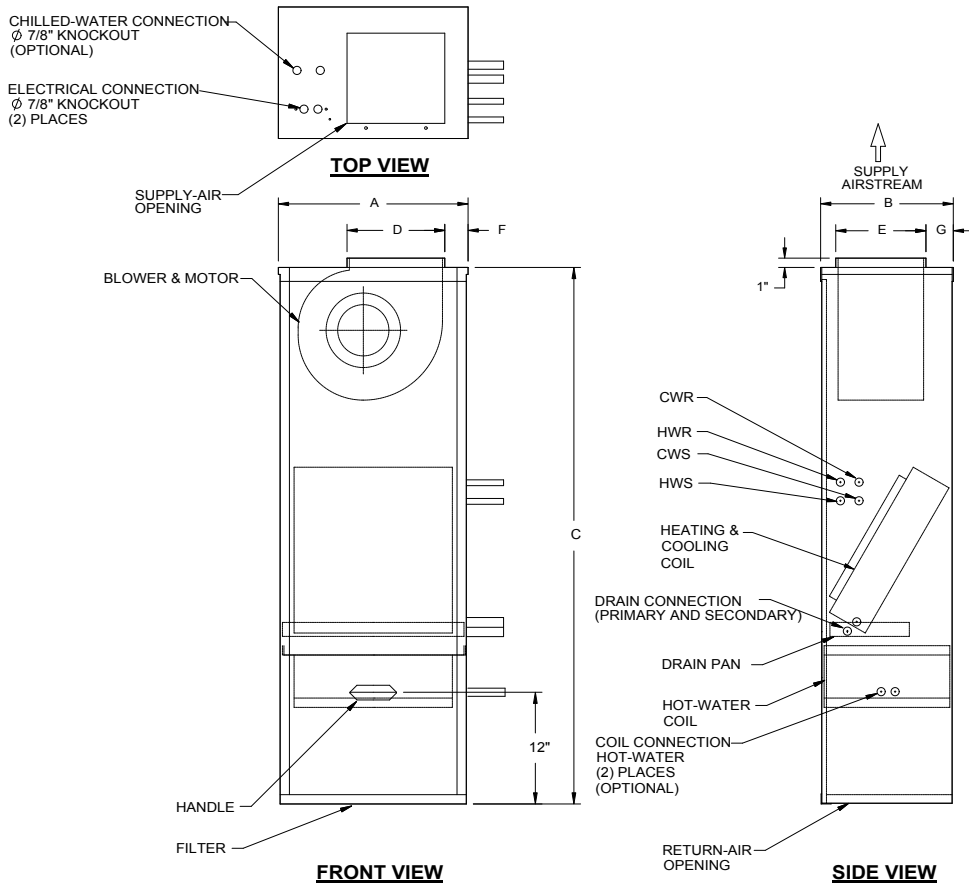
Sound Data

Vertical (SV Series)

Size	Series / Model	Fan Speed	OCTAVE BAND						
			2	3	4	5	6	7	8
			CENTER FREQUENCY (CPS)						
			125	250	500	1000	2000	4000	8000
004	SV Series Basic / Deluxe	High	58.1	51.8	48.6	44.5	36.3	32.5	30.8
		Medium	54.5	39.5	38.1	33.6	27.3	24.3	26.3
		Low	49.6	38.5	37.2	32.1	26.1	22.7	24.6
006	SV Series Basic / Deluxe	High	59.5	50.1	49.1	43.2	38.1	34.7	35.1
		Medium	56.3	47.3	44.6	38.8	33.4	32.0	33.4
		Low	50.9	45.5	41.2	35.6	30.7	27.3	26.1
	SV Series Front Return	High	59.2	52.1	51.6	46.4	41.4	36.0	33.6
		Medium	53.6	49.3	47.7	41.5	35.5	33.8	26.0
		Low	51.8	47.1	44.3	36.4	34.2	31.5	24.4
008	SV Series Basic / Deluxe	High	62.1	56.6	53.3	48.3	44.2	40.8	36.5
		Medium	56.6	48.2	45.7	41.6	38.2	32.9	29.7
		Low	51.8	44.6	39.6	36.2	33.8	27.8	24.4
	SV Series Front Return	High	60.1	57.0	55.7	53.0	49.7	45.0	37.0
		Medium	56.7	52.3	47.0	45.4	41.2	34.2	27.8
		Low	53.4	46.5	43.7	42.2	39.6	32.7	25.4
010	SV Series Basic / Deluxe	High	63.2	56.9	57.3	53.1	47.3	41.8	39.8
		Medium	58.1	51.7	53.8	48.3	42.4	37.2	31.7
		Low	55.5	46.9	46.1	41.4	35.6	32.3	29.1
	SV Series Front Return	High	61.5	59.8	57.2	56.0	52.1	47.1	39.1
		Medium	57.2	54.1	52.2	49.3	42.1	38.9	27.3
		Low	54.1	48.6	45.8	44.5	39.7	36.7	26.1
012	SV Series Basic / Deluxe	High	65.3	61.4	60.1	56.5	49.9	45.1	43.1
		Medium	60.4	55.9	54.2	52.1	44.7	41.1	35.4
		Low	56.3	51.7	46.8	44.3	36.9	35.6	30.1
	SV Series Front Return	High	62.5	61.3	59.8	57.8	54.7	47.6	40.8
		Medium	58.8	57.2	54.1	50.3	44.1	38.6	28.7
		Low	54.3	53.7	48.6	46.5	41.4	34.2	27.7
015	SV Series Front Return	High	58.5	55.5	53.0	49.0	47.0	45.0	40.8
		Medium	54.3	51.4	48.1	44.3	42.1	38.9	29.0
		Low	51.0	48.4	45.4	41.2	38.7	35.4	26.8
018	SV Series Front Return	High	61.0	57.5	55.5	51.5	50.0	47.0	42.4
		Medium	56.2	53.3	52.1	49.1	46.4	42.0	32.1
		Low	52.4	50.5	49.4	46.4	41.4	38.5	30.8
022	SV Series Front Return	High	62.5	60.0	58.6	53.2	51.7	48.4	45.6
		Medium	58.0	56.4	55.3	51.4	49.5	44.1	32.7
		Low	53.1	51.5	50.4	47.4	45.4	41.8	31.9

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

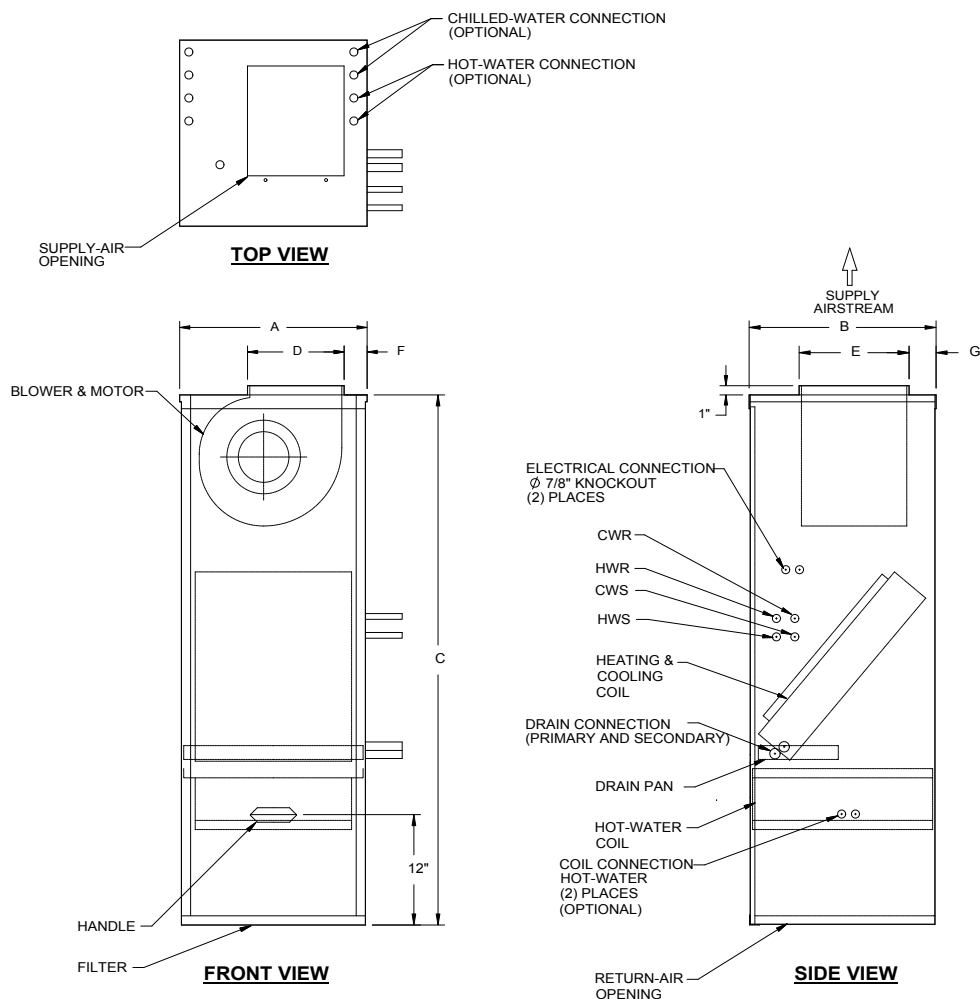
HI-PERFORMANCE CASED VERTICAL - BASIC/DELUXE BOTTOM RETURN 400 - 800 CFM



MODEL BASIC / DELUXE	A	B	C	D	E	F	G	FILTER SIZE
400	20-5/32	14-5/32	57-5/8	10-15/32	7-3/32	2-7/32	3-1/32	16X16X1
600	20-5/32	14-5/32	57-5/8	10-15/32	8-15/32	2-7/32	3-1/32	16X20X1
800	20-5/32	14-5/32	57-5/8	10-15/32	9-13/32	2-7/32	3-1/32	20X20X1

- 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 and HW on 004-008.

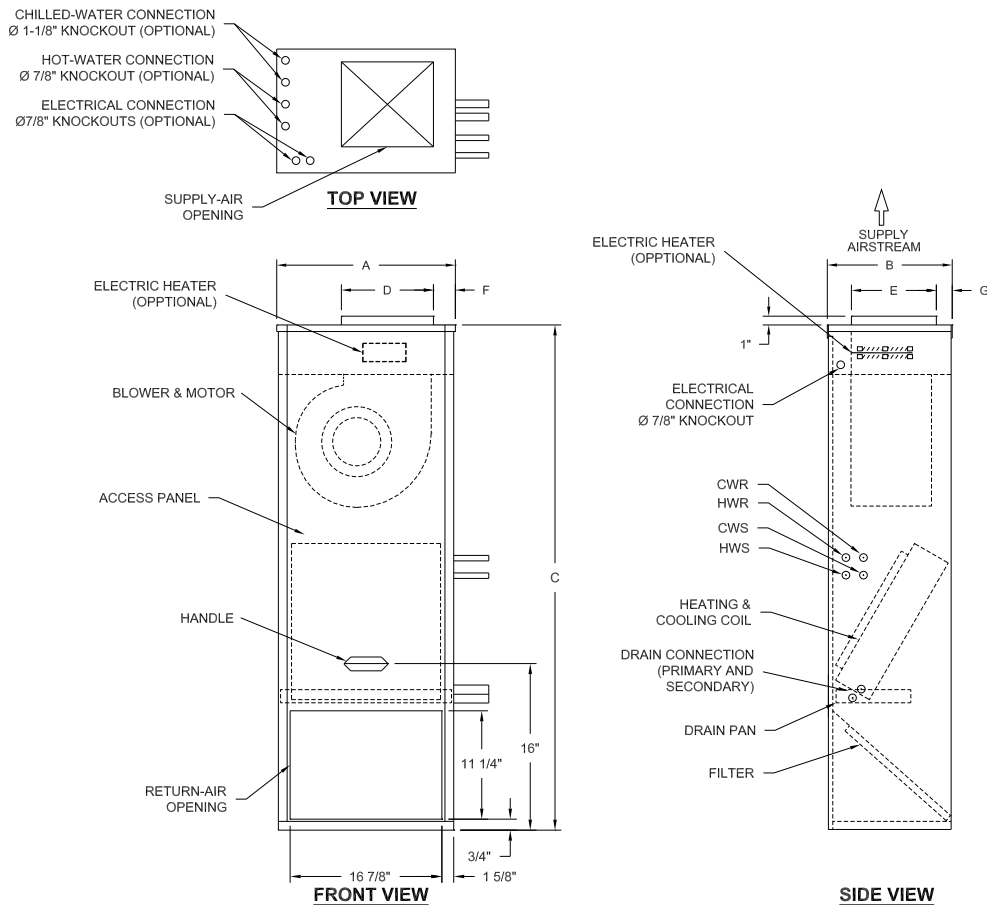
HI-PERFORMANCE CASED VERTICAL - BASIC/DELUXE BOTTOM RETURN 1000 - 2200 CFM



MODEL BASIC / DELUXE	A	B	C	D	E	F	G	FILTER SIZE
1000	20-11/32	20-5/16	57-5/8	10-3/8	11-15/16	2-1/8	3-1/16	20X20X1
1200	20-11/32	20-5/16	57-5/8	10-3/8	11-15/16	2-1/8	3-1/16	20X20X1
1500	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1
1800	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1
2200	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1

- 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 CV010; 3/4" on 012-022 and 1/2" HW on 010-022.

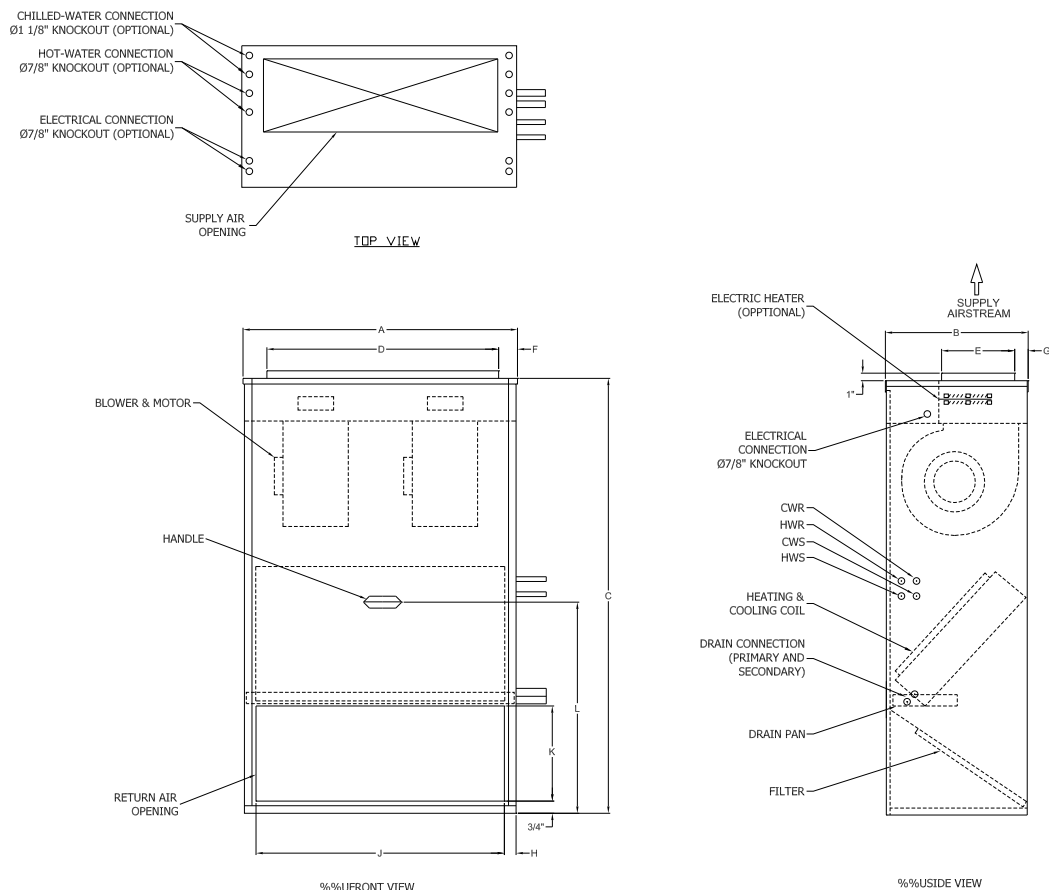
HI-PERFORMANCE CASED VERTICAL - BASIC - OPTIONAL FRONT RETURN 400 - 800 CFM



MODEL BASIC / DELUXE	A	B	C	D	E	F	G	FILTER SIZE
400	20-5/32	14-5/32	57-5/8	10-15/32	7-3/32	2-7/32	3-1/32	16X16X1
600	20-5/32	14-5/32	57-5/8	10-15/32	8-15/32	2-7/32	3-1/32	16X20X1
800	20-5/32	14-5/32	57-5/8	10-15/32	9-13/32	2-7/32	3-1/32	20X20X1

- 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 and HW on 004-008.

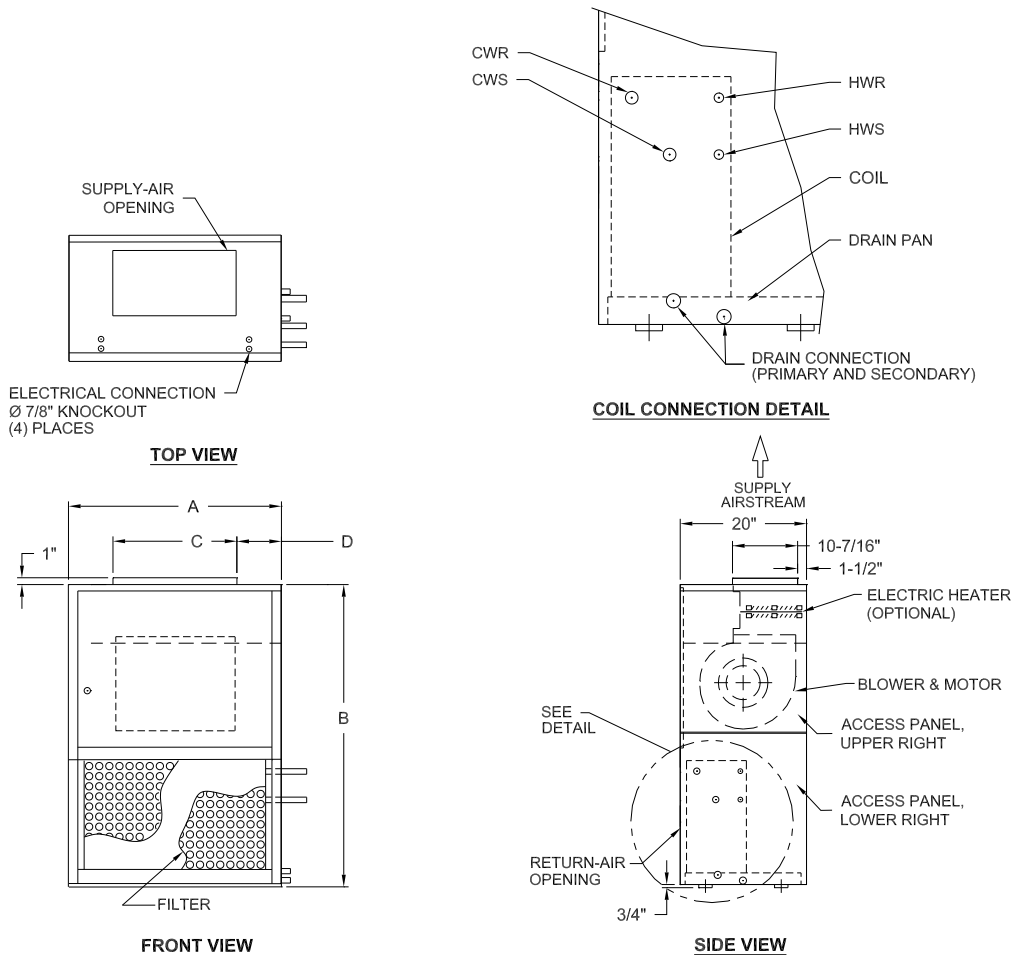
HI-PERFORMANCE CASED VERTICAL - BASIC - OPTIONAL FRONT RETURN 1000 - 2200 CFM



MODEL BASIC / DELUXE	A	B	C	D	E	F	G	FILTER SIZE
1000	20-11/32	20-5/16	57-5/8	10-3/8	11-15/16	2-1/8	3-1/16	20X20X1
1200	20-11/32	20-5/16	57-5/8	10-3/8	11-15/16	2-1/8	3-1/16	20X20X1
1500	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1
1800	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1
2200	36	24-5/8	62-3/4	24	10-1/2	3	3	30X24X1

- 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 CV010; 3/4" on 012-022 and 1/2" HW on 010-022.

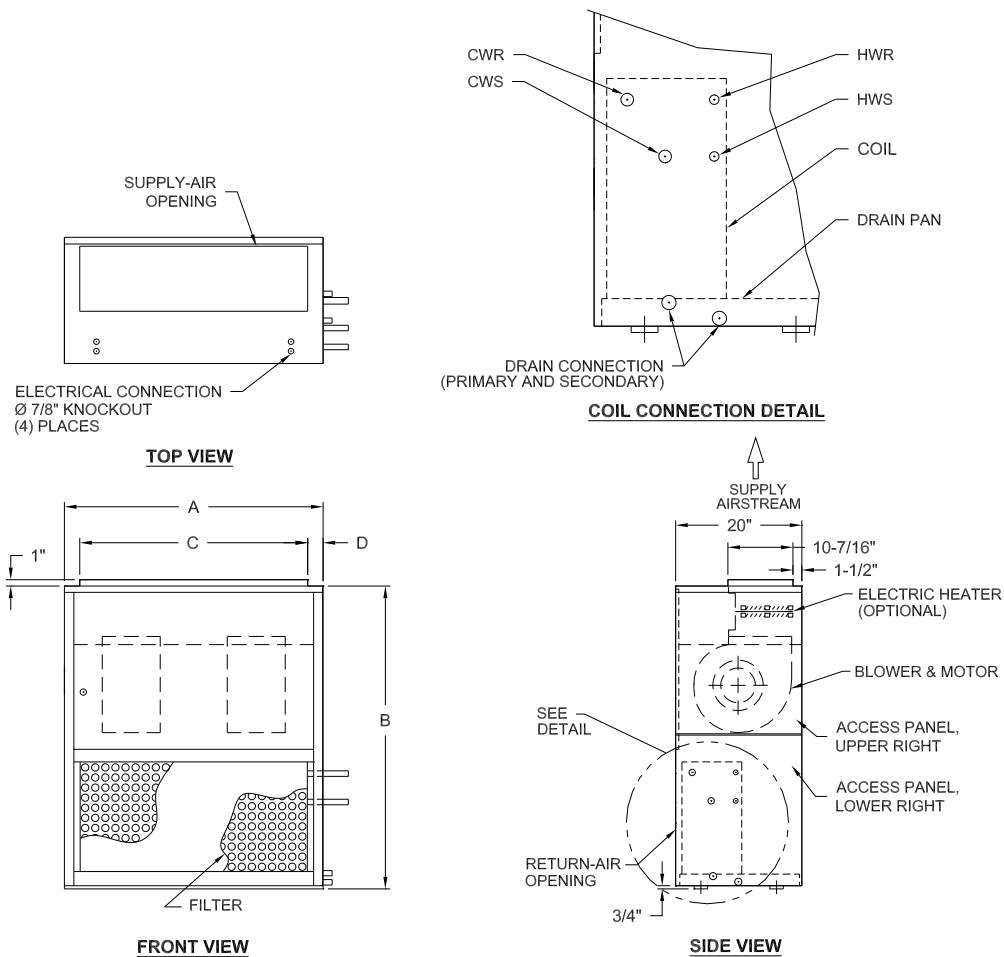
HI-PERFORMANCE CLOSET VERTICAL - FRONT RETURN/TOP SUPPLY 600 - 1200 CFM



MODEL FRONT RETURN / TOP SUPPLY	A	B	C	D	FILTER SIZE
600	21	42	12-1/4	4-3/8	16X16X1
800	25	42	12-1/4	6-3/8	16X20X1
1000	25	45	12-1/4	6-3/8	20X20X1
1200	30	45	12-1/4	8-7/8	20X25X1

- 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 for 006; 3/4" on 008-022 chilled water. 1/2" HW on 006-022 hot water.

HI-PERFORMANCE CLOSET VERTICAL - FRONT RETURN/TOP SUPPLY 1500 - 2200 CFM



MODEL FRONT RETURN / TOP SUPPLY	A	B	C	D	FILTER SIZE
1500	37	48	25-1/4	5-7/8	25X25X1
1800	37	48	32-1/4	2-3/8	(2) 25X16X1
2200	41	48	36-1/4	2-3/8	(2) 25X20X1

- 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 for 006; 3/4" on 008-022 chilled water. 1/2" HW on 006-022 hot water.

Weights and Measures

The following SV 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
SV & DF Series Basic / Deluxe	004	3	59	21	15	104	109	1,499	533	381	47	50
	004	4	59	21	15	109	116	1,499	533	381	49	53
	006	3	59	21	15	110	115	1,499	533	381	50	52
	006	4	59	21	15	116	122	1,499	533	381	52	55
	008	3	59	21	15	142	147	1,499	533	381	64	67
	008	4	59	21	15	147	154	1,499	533	381	67	70
	010	3	59	21	21	151	156	1,499	533	533	58	71
	010	4	59	21	21	156	163	1,499	533	533	71	74
	012	3	59	21	21	167	172	1,499	533	533	76	78
	012	4	59	21	21	172	179	1,499	533	533	78	81
	015	3	59	22	30	224	234	1,499	559	762	102	106
	015	4	59	22	30	230	243	1,499	559	762	104	110
	018	3	59	22	30	234	244	1,499	559	762	106	111
	018	4	59	22	30	240	253	1,499	559	762	109	115
SCTF Series Front Return	022	3	59	22	30	234	244	1,499	559	762	106	111
	022	4	59	22	30	240	253	1,499	559	762	109	115
	004	3	43	21	15	116	121	1,092	533	508	53	55
	004	4	43	21	15	121	128	1,092	533	508	55	58
	006	3	43	21	15	116	121	1,092	533	508	53	55
	006	4	43	21	15	121	128	1,092	533	508	55	58
	008	3	43	25	15	131	136	1,092	635	508	59	62
	008	4	43	25	15	136	143	1,092	635	508	62	65
	010	3	46	25	21	141	146	1,168	635	508	64	66
	010	4	46	25	21	146	153	1,168	635	508	66	70
	012	3	46	30	21	152	157	1,168	762	508	69	71
	012	4	46	30	21	157	164	1,168	762	508	71	75
	015	3	49	37	30	202	212	1,245	940	508	92	96
	015	4	49	37	30	208	221	1,245	940	508	94	100
	018	3	49	37	30	213	223	1,245	940	508	97	101
	018	4	49	37	30	219	232	1,245	940	508	99	105
	022	3	49	41	30	230	240	1,245	1041	508	104	109
	022	4	49	41	30	236	249	1,245	1041	508	107	113

General

Furnish and install Airtherm SV Series Vertical 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 ARI 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. The fan and filter bottom access panel has two screws for easy removal and access for service and is also equipped with a safety chain.

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 Anti-microbial 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 ARI Standard 350-2000 (non-ducted equipment) and ARI 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 1" pleated filters rated at 25-30% efficiency and MERV 6 based on ASHRAE 52.2 - 1999.

Electrical (Option)

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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