

FORCE-FLOW

MOTORIZED CABINET HEATERS

200 TO 1010 CFM

REV. 1
2018

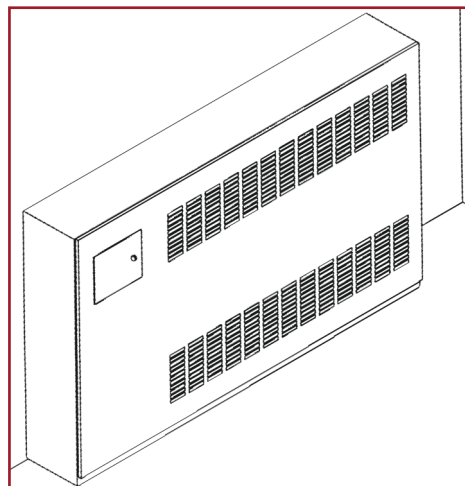
HEATING

ROSEMEX PRODUCTS



ROSEMEX
HEATING

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CABINET

The cabinets are constructed of heavy 16 gauge furniture steel with removable fronts to provide easy access to motor, blower and heating element. The cabinets are rust proofed and then finished with a prime coat. They can be painted on the job to blend with any color scheme or can be furnished with a factory enamel finish.

COILS

The heating coils are of 5/8" O.D. seamless copper tubes expanded into aluminum fins to form a permanent mechanical bond. Two rows for hot water or steam. Female pipe coil connections. Steam distributing coils have cast iron headers. Supply and return connections on left side of units on all models and sizes.

BLOWERS

The blowers consist of two double inlet type centrifugal aluminum fans mounted directly on a double ended motor shaft.

ACCESS DOOR

Provides easier access to controls on left side with camlock fastener.

HINGED PANEL

Supplied on ceiling arrangements to remove fan deck & filter.

MOTORS

Permanent split capacitor type. Steel shell, die cast aluminium shields, galvanized steel cradle. Resilient mount. Self aligning sleeve bearings, horizontal mount, class "B" insulation, thermally protected. Windings are "tropical impregnated" for high humidity areas. These motors have been thoroughly tested to provide whisper quiet performance with speed variations from high to low.

SPEED SWITCH

Solid state three speed control with off position.

FILTERS

Filters in these cabinet heaters are removable in seconds, without tools. After simply opening the unit's front panel, the filter easily slides out. Filters are provided as standard. Filters clean air entering the cabinet heater before it is discharged into conditioned space.

PIPING

Space is provided to allow all piping connections to be made inside the cabinet.

FORCE-FLOW CABINET HEATER

OPTIONAL EQUIPMENT

1. ALUMINUM BAR GRILLE

Can be provided in lieu of standard louver on outlet or inlet. Heavy duty bar grille of clear anodized aluminum. Can be painted to match decorator colors if so required.

2. HIGHER R.P.M. MOTOR

Permanent split capacitor 1650 RPM motor for higher external static pressure or better throw of air (especially on ceiling arrangements).

3. MOTOR STARTER

Manual reset toggle switch starter with overload protection.

4. THERMOSTAT

Fan control by air temperature. Return air stat monitors incoming air to unit, starting blower, if the return air temperature drops below set point. Fan is turned off when room temperature is satisfactory. Thermostat in cabinet for ceiling and inverted arrangements not available.

5. SURFACE AQUASTAT

Fan control by air temperature. Return air stat monitors incoming air to unit, starting blower, if the return air temperature drops below set point. Fan is turned off when room temperature is satisfactory. Thermostat in cabinet for ceiling and inverted arrangements not available.

6. PERMANENT FILTER

Made of durable aluminum which has an average arrestance of 61%. Light and easy to handle.

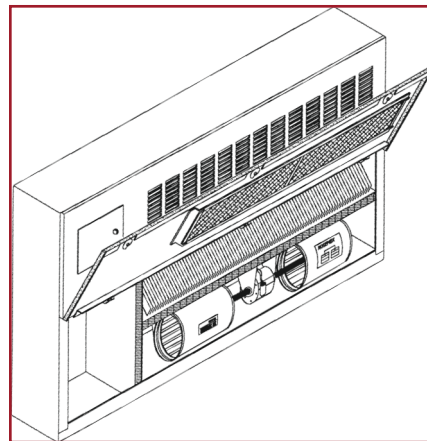
7. INSULATION

1/2" flexible fiber glass duct liner on back and sides off external box, for recess arrangement only.

8. HINGED PANEL

Allows easy access to the piping, valve, filter and full access to fan deck.

Optional for wall & floor unit.



RELATIVE NOISE LEVEL CLASSES

CLASSES	TYPE OF AREA
1	Movie — Theatres — Offices — Reception rooms — Libraries — Museums — Court rooms — Hospitals, etc.
2	Lobbies — Laboratories — Recreation halls — Waiting rooms — Restaurants — Night clubs — Bowling alleys — Gymnasiums — General open offices — Drafting rooms — Barber shops, etc
3	Kitchens — Washrooms & toilets — Cafeterias — Department stores — Supermarkets — Swimming pools — Garages — Laundries — Hall and corridors — Entrance-ways
4	Factories — Mills — Heavy machinery maintenance — Foundries, etc.

TABLE 1

UNIT SIZE	60°F ENTERING AIR TEMPERATURE												PERMANENT SPLIT CAPACITOR MOTOR 115/1/60			CFM	SOUND CLASS
	200°F EWT & 20°F DROP				200°F EWT & 30°F DROP				200°F EWT & 40°F DROP								
	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	HP	RPM	AMP. MAX.		
F-300-A	22.4	163	2.24	0.40	21.0	156	1.40	0.20	19.5	150	0.98	0.10	1 x 1/15	650	0.80	200	1
F-300-B	26.2	158	2.62	0.50	24.5	152	1.63	0.25	22.7	145	1.14	0.15		850	1.00	245	1
F-300-C	30.6	154	3.06	0.70	28.5	147	1.90	0.30	26.3	141	1.32	0.20		1050	1.20	300	2
F-400-A	28.9	162	2.89	0.75	27.2	156	1.82	0.35	25.4	150	1.27	0.21	1 x 1/15	650	0.80	260	1
F-400-B	35.1	156	3.51	0.90	32.9	150	2.19	0.40	30.6	144	1.54	0.25		850	1.00	335	1
F-400-C	40.0	152	4.00	1.20	37.4	146	2.50	0.50	34.7	140	1.74	0.30		1050	1.20	400	2
F-600-A	44.4	159	4.44	1.60	42.0	154	2.80	0.70	39.5	148	1.98	0.40	1 x 1/4	650	1.70	410	1
F-600-B	51.3	154	5.13	2.20	48.1	148	3.20	1.05	44.8	142	2.24	0.55		850	2.20	505	1
F-600-C	58.2	150	5.82	2.60	54.4	144	3.62	1.20	50.5	138	2.52	0.60		1050	3.80	600	2
F-800-A	56.4	162	5.64	2.90	53.4	156	3.56	1.30	50.3	151	2.51	0.70	2 x 1/15	650	1.60	510	1
F-800-B	67.8	156	6.78	4.10	64.1	150	4.27	1.90	60.2	145	3.01	1.05		850	2.00	650	2
F-800-C	77.6	151	7.76	5.20	73.1	146	4.87	2.30	68.6	141	3.43	1.30		1050	2.40	780	2
F-1200-A	80.2	161	8.02	7.40	76.4	156	5.09	3.40	72.4	151	3.62	1.90	2 x 1/4	650	3.40	730	1
F-1200-B	93.3	156	9.33	10.10	88.6	151	5.90	4.60	83.8	146	4.19	2.50		850	4.40	890	2
F-1200-C	102.4	153	10.20	12.00	97.2	148	6.48	5.40	91.8	143	4.59	3.05		1050	7.60	1010	2
SPECIAL TURBO - HIGH R.P.M. UNITS																	
F-300-T	38.9	143	3.89	1.15	35.7	136	2.38	0.45	32.4	129	1.62	0.28	1 x 1/4	1650	3.80	430	3
F-400-T	47.5	144	4.75	1.90	43.8	137	2.92	0.80	40.2	131	2.01	0.45		1650	3.80	520	3
F-600-T	64.9	145	3.6.49	4.10	60.5	139	4.03	1.80	56.1	134	2.80	1.05		1650	3.80	700	3

TABLE 2

HOT WATER CONVERSION FACTORS*											
ENTER. AIR TEMPERATURE °F	ENTERING WATER TEMPERATURE °F										
	130	140	150	160	170	180	190	200	210	220	230
0	-	-	1.157	1.251	1.320	1.413	1.490	1.572	1.653	1.735	1.830
10	0.910	0.970	1.065	1.151	1.218	1.307	1.379	1.456	1.532	1.608	1.695
20	0.830	0.890	0.975	1.058	1.146	1.210	1.278	1.353	1.427	1.498	1.582
30	0.740	0.810	0.894	0.971	1.040	1.117	1.188	1.260	1.329	1.403	1.479
40	0.650	0.730	0.810	0.886	0.955	1.030	1.101	1.172	1.241	1.312	1.389
50	0.580	0.650	0.728	0.804	0.871	0.946	1.015	1.085	1.154	1.226	1.300
60	0.500	0.570	0.648	0.723	0.789	0.862	0.931	1.000	1.069	1.138	1.212
70	0.420	0.490	0.566	0.644	0.709	0.782	0.851	0.918	0.986	1.055	1.128
80	0.350	0.420	0.493	0.566	0.631	0.702	0.771	0.837	0.904	0.972	1.045
90	0.280	0.350	0.419	0.491	0.555	0.626	0.693	0.759	0.825	0.892	0.964
100	0.210	0.270	0.346	0.417	0.480	0.551	0.616	0.682	0.747	0.813	0.885

* To determine MBH capacity at any entering water temperature and entering air temperature, multiply rated capacities at 200°F EWT. and 60°F EAT. obtained from TABLE 1 by the appropriate conversion factor from TABLE 2.

NOTE THAT THE USGPM REMAINS CONSTANT.

FORCE-FLOW CABINET HEATER

MODEL FS STEAM



TABLE 3

MODEL CAT.	60°F ENTERING AIR TEMPERATURE				PERMANENT SPLIT CAPACITOR MOTOR 115/1/60			CFM	SOUND CLASS
	2 PSIG STEAM				HP	RPM	AMP. MAX.		
	MBH	EDR	FINAL AIR °F	COND. LB/HR					
F-300-A	30.3	126	199	31.0	1 x 1/15	650	0.80	200	1
F-300-B	35.2	146	192	36.0		850	1.00	245	1
F-300-C	40.5	168	184	42.0		1050	1.20	300	2
F-400-A	38.5	160	196	40.0	1 x 1/15	650	0.80	260	1
F-400-B	46.2	192	187	48.0		850	1.00	335	1
F-400-C	51.9	216	179	54.0		1050	1.20	400	2
F-600-A	57.9	241	190	60.0	1 x 1/4	650	1.70	410	1
F-600-B	66.7	278	182	69.0		850	2.20	505	1
F-600-C	74.3	309	174	77.0		1050	3.80	600	2
F-800-A	73.5	306	192	76.0	2 x 1/15	650	1.60	510	1
F-800-B	86.9	362	183	90.0		850	2.00	650	2
F-800-C	97.7	407	175	101		1050	2.40	780	2
F-1200-A	103	429	190	107	2 x 1/4	650	3.40	730	1
F-1200-B	118	491	182	122		850	4.40	890	2
F-1200-C	128	533	177	132		1050	7.60	1010	2
SPECIAL TURBO - HIGH R.P.M. UNITS									
FS-300-T	50.9	212	169	53.0	1 x 1/4	1650	3.80	430	3
FS-400-T	60.8	253	167	63.0		1650	3.80	520	3
FS-600-T	81.5	339	165	84.0		1650	3.80	700	3

TABLE 4

STEAM CONVERSION FACTORS

ENTERING AIR TEMPERATURE	STEAM PRESSURE LB PER SQUARE IN. GAUGE				
	0	2	5	10	15
-10	1.53	1.58	1.64	1.73	1.79
0	1.44	1.49	1.55	1.63	1.70
10	1.36	1.40	1.45	1.54	1.61
20	1.27	1.32	1.38	1.46	1.52
30	1.19	1.23	1.28	1.37	1.44
40	1.11	1.15	1.20	1.29	1.35
50	1.03	1.07	1.12	1.21	1.27
60	0.95	1.0	1.05	1.13	1.19
70	0.88	0.92	0.97	1.05	1.11
80	0.80	0.85	0.90	0.98	1.04
90	0.73	0.78	0.82	0.90	0.97
100	0.67	0.71	0.76	0.83	0.89

TABLE 5

CFM CORRECTION FACTORS

ENTERING AIR TEMPERATURE	40°F	50°F	60°F	70°F	80°F
FACTOR	1.04	1.02	1.00	0.98	0.94

TABLE 6

AIR VOLUME & BTUH VS. EXTERNAL STATIC PRESSURE

MODEL	AIR VOLUME FACTORS (CFM X FACTOR)					BTUH CORRECTION FACTORS (MBH X FACTOR)				
	INCHES OF WATER					INCHES OF WATER				
	0.00	0.05	0.10	0.125	0.15	0.00	0.05	0.10	0.125	0.15
F & FS-300	1.00	0.90	0.80	0.75	0.70	1.00	0.95	0.85	0.80	0.75
F & FS-400	1.00	0.90	0.80	0.75	0.70	1.00	0.95	0.85	0.80	0.75
F & FS-600	1.00	0.90	0.80	0.75	0.70	1.00	0.95	0.85	0.80	0.75
F & FS-800	1.00	0.88	0.78	0.73	0.68	1.00	0.93	0.83	0.78	0.73
F & FS-1200	1.00	0.88	0.78	0.73	0.68	1.00	0.93	0.83	0.78	0.73
F-300-T	1.00	0.86	0.76	0.71	0.66	1.00	0.91	0.81	0.76	0.71
F-400-T	1.00	0.86	0.76	0.71	0.66	1.00	0.91	0.81	0.76	0.71
F-600-T	1.00	0.86	0.76	0.71	0.66	1.00	0.91	0.81	0.76	0.71

Note: Steam heating units are not available on inverted models. (Bottom discharged arrangements)

TABLE 7

E.W.T. °F	WATER TEMP. DROP °F	60°F ENTERING AIR TEMPERATURE											
		F-200-A2 & STD - 2-ROW COIL				F-200-B2 & STD - 2-ROW COIL				F-200-C2 & STD - 2-ROW COIL			
		MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O
180	20	10.65	135	1.09	0.09	12.91	130	1.32	0.12	14.45	126	1.48	0.15
	30	9.30	126	0.63	0.03	11.22	120	0.77	0.05	12.52	117	0.85	0.06
	40	7.99	117	0.41	0.02	9.59	112	0.49	0.02	10.67	109	0.55	0.03
160	20	8.27	118	0.84	0.06	10.10	114	1.02	0.08	11.18	111	1.14	0.10
	30	6.91	109	0.47	0.02	8.29	105	0.56	0.03	9.23	102	0.63	0.05
	40	5.61	99	0.29	0.01	6.70	96	0.34	0.01	7.43	94	0.38	0.02
140	20	5.91	102	0.60	0.03	7.12	98	0.72	0.05	7.93	96	0.80	0.05
	30	4.56	92	0.31	0.01	5.44	89	0.37	0.01	6.03	87	0.41	0.02
	40	3.38	84	0.17	0.01	4.01	81	0.20	0.01	4.43	80	0.22	0.01
120	20	3.59	85	0.36	0.01	4.30	83	0.43	0.02	4.76	82	0.48	0.02
	30	2.38	77	0.16	0.01	2.82	75	0.19	0.01	3.11	74	0.21	0.01
	40	1.52	70	0.08	0.00	1.79	69	0.09	0.00	1.97	69	0.10	0.06

TABLE 8

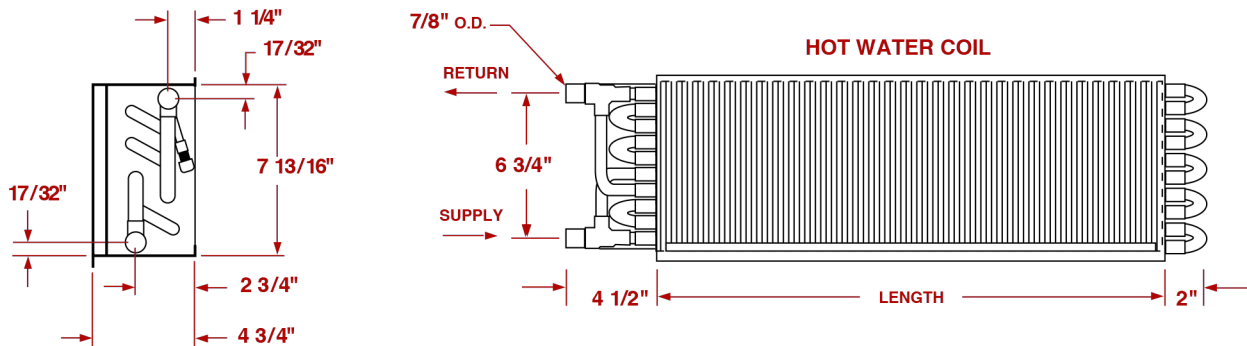
E.W.T. °F	WATER TEMP. DROP °F	60°F ENTERING AIR TEMPERATURE											
		F-200-A4 & SPECIAL - 4-ROW COIL				F-200-B4 & SPECIAL - 4-ROW COIL				F-200-C4 & SPECIAL - 4-ROW COIL			
		MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O	MBH	FINAL AIR TEMP.	USGPM	PRESSURE DROP FT. H ₂ O
180	20	15.16	159	1.56	0.4	19.08	153	1.96	0.51	21.85	151	2.24	0.64
	30	14.41	148	0.98	0.16	18.01	147	1.23	0.23	20.53	144	1.40	0.29
	40	13.54	137	0.69	0.09	16.80	139	0.86	0.13	19.07	137	0.97	0.16
160	20	12.31	136	1.25	0.24	15.44	133	1.57	0.36	17.64	130	1.80	0.45
	30	11.45	129	0.78	0.11	14.24	127	0.97	0.16	16.18	124	1.10	0.19
	40	10.44	118	0.53	0.06	12.86	116	0.65	0.08	14.54	117	0.74	0.10
140	20	9.42	117	0.95	0.16	11.76	113	0.72	0.05	13.38	111	1.36	0.28
	30	8.42	109	0.57	0.06	10.38	106	0.70	0.09	11.74	104	0.79	0.11
	40	7.22	98	0.36	0.03	8.81	97	0.45	0.04	9.91	95	0.50	0.05
120	20	6.46	97	0.65	0.08	7.99	93	0.81	0.12	9.05	91	0.91	0.15
	30	5.25	89	0.35	0.03	6.40	84	0.43	0.04	7.19	83	0.48	0.05
	40	3.93	78	0.20	0.01	4.74	75	0.24	0.02	5.29	74	0.27	0.02

TABLE 9

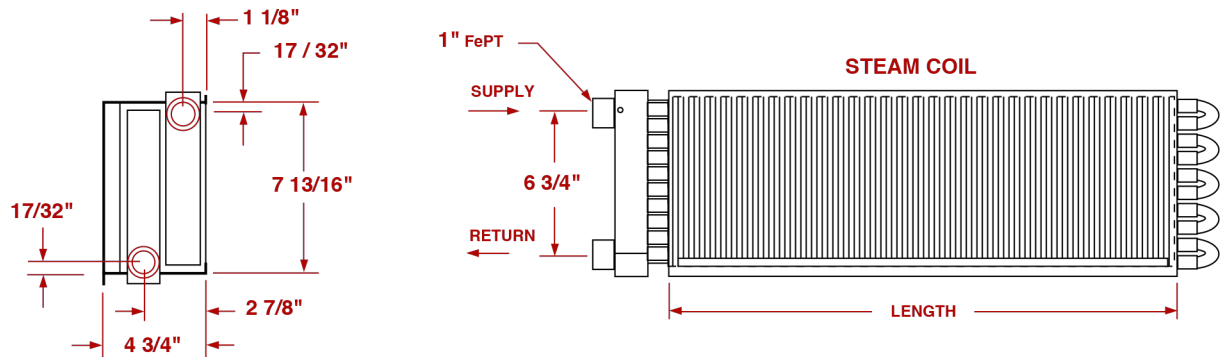
UNIT SIZE	MOTOR				SOUND CLASS
	HP	RPM	AMP.	CFM	
F-200-A	1 @ 1/15	650	0.96	130	1
F-200-B		850	0.96	170	1
F-200-C		1050	0.96	200	1

FORCE-FLOW CABINET HEATER

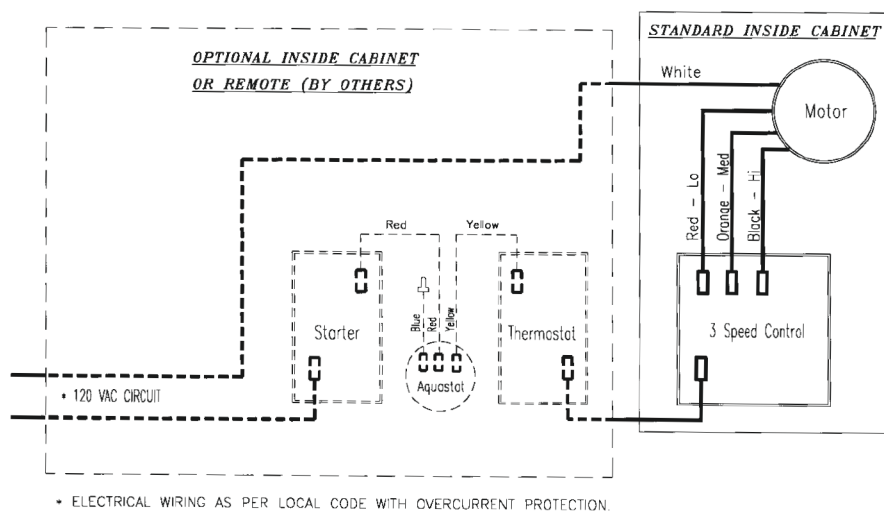
COIL DIMENSIONS



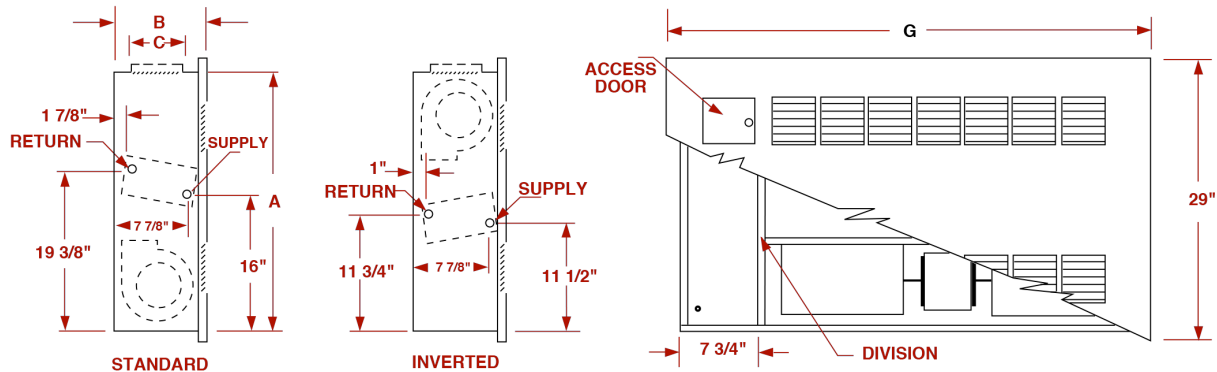
TYPES	CONNECTIONS	MODEL	F-200	F-300	F-400	F-600	F-800	F-1200
WATER	$\frac{3}{4}"$ NOM.	LENGTH	13"	$22 \frac{3}{4}"$	27"	$35 \frac{3}{4}"$	48"	64"
STEAM	1" N.P.T.							



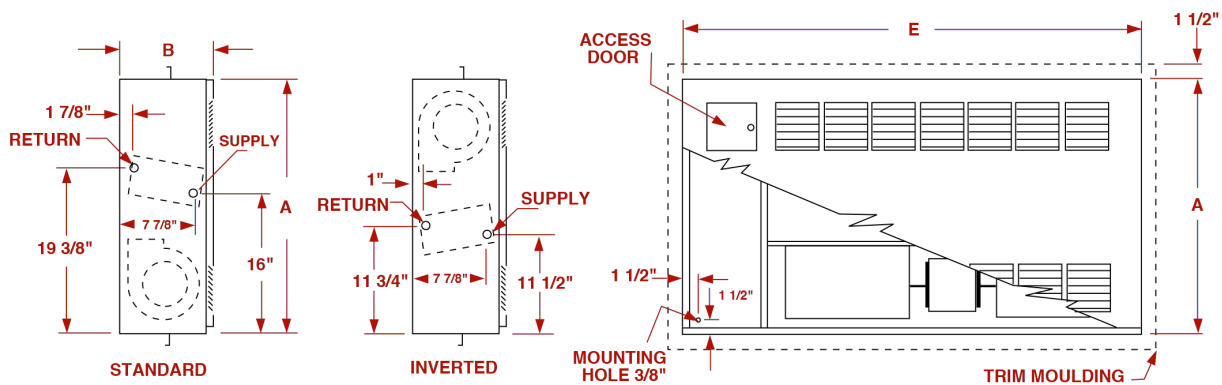
TYPICAL WIRING DIAGRAM



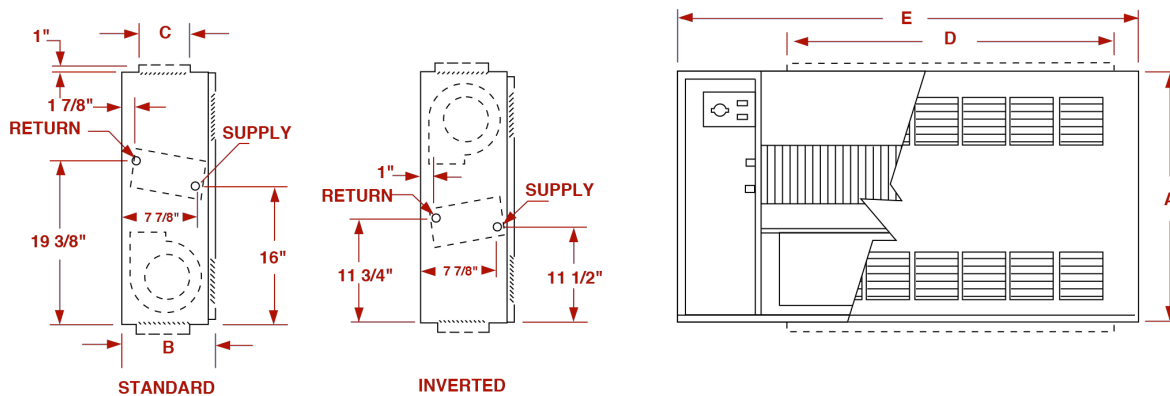
FULLY-RECESSED WALL & CEILING



SEMI-RECESSED WITH TRIM-MOULDING WALL & CEILING



EXPOSED WALL, CEILING & FLOOR

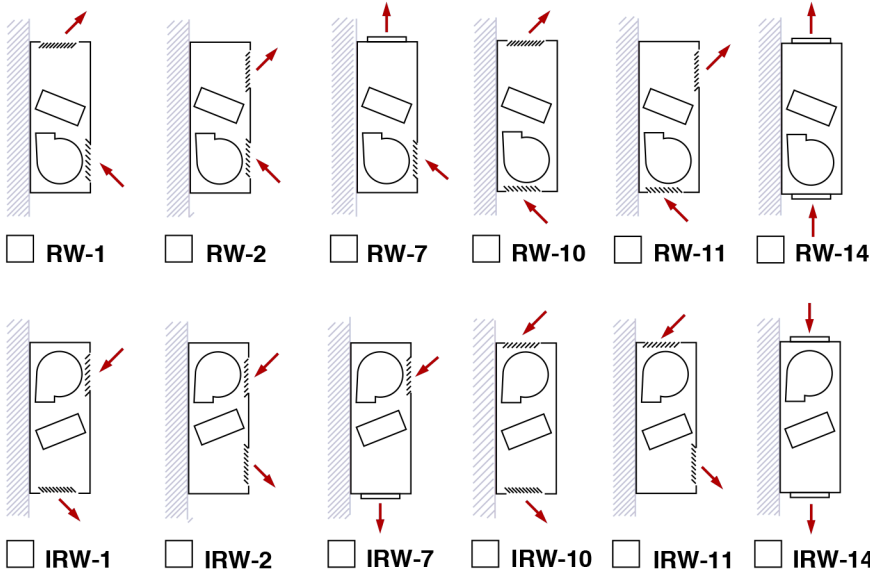


MODEL	A	B	C	D	E	G	WEIGHT - LBS
F & FS-200	26"	9 7/16"	5 1/8"	13 3/4"	26"	29"	75
F & FS-300	26"	9 7/16"	5 1/8"	25 3/4"	37 3/4"	40 3/4"	100
F & FS-400	26"	9 7/16"	5 1/8"	29 3/4"	42"	45"	110
F & FS-600	26"	9 7/16"	5 1/8"	37 3/4"	50 3/4"	53 3/4"	125
F & FS-800	26"	9 7/16"	5 1/8"	49 3/4"	63 1/8"	66 1/8"	190
F & FS-1200	26"	9 7/16"	5 1/8"	65 3/4"	79"	82"	210

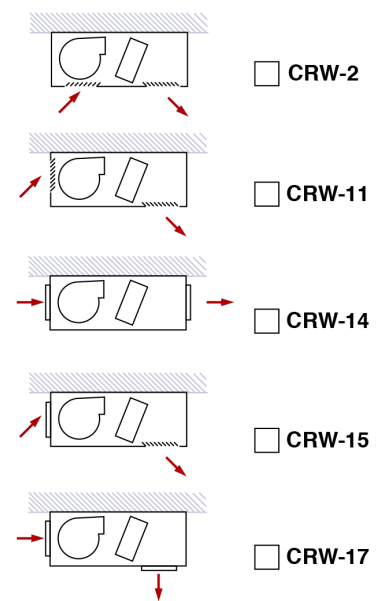
FORCE-FLOW CABINET HEATER

CABINETS ACCESSORIES

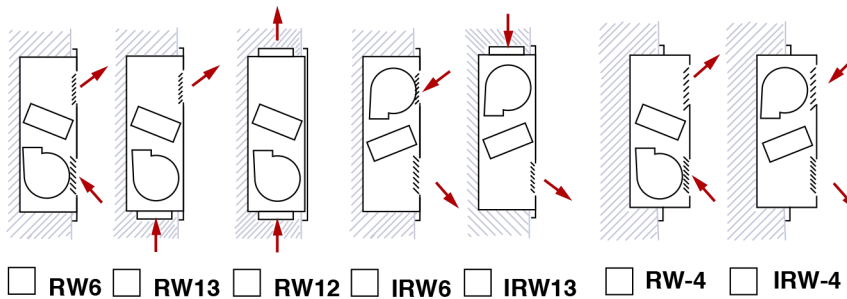
WALL MOUNTED FULLY EXPOSED



CEILING MOUNTED FULLY EXPOSED C/W HINGED PANEL *

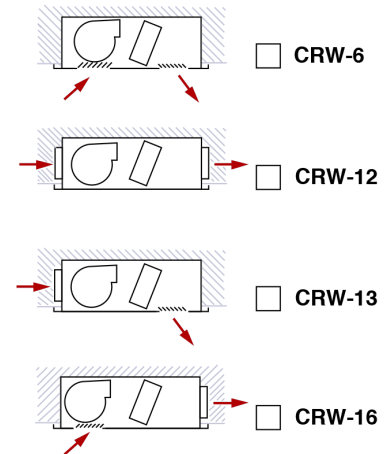


FULLY RECESSED

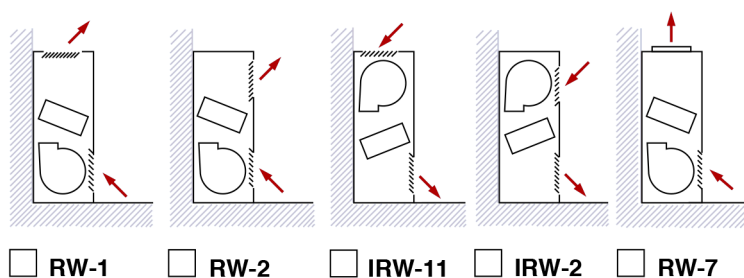


SEMI-RECESSED WITH WALL TRIM

FULLY RECESSED C/W HINGED PANEL *



FLOOR MOUNTED FULLY EXPOSED



ROSEMEX

PRODUITS

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