

CONVECTOR

Submittal

SF-A / SFG-A
Slope Top Cabinet
Wall / Floor Mounted

Specification

☐ SF-A Open Inlet

FRONT and LINER:

STYLE: Slope Outlet
OUTLET: Stamped Louvers
Pencil Proof

LENGTHS: 20" thru 64" in 4" Increments

MAT'L: Cabinet Front and Liner
☐ 18 Ga./20 Ga. CRS (Std)
☐ 18 Ga./18 Ga. CRS (Opt'l)
☐ 16 Ga./20 Ga. CRS (Opt'l)
☐ 16 Ga./18 Ga. CRS (Opt'l)
☐ 16 Ga./16 Ga. CRS (Opt'l)
☐ 14 Ga./20 Ga. CRS (Opt'l)
☐ 14 Ga./18 Ga. CRS (Opt'l)
☐ 14 Ga./16 Ga. CRS (Opt'l)
☐ 14 Ga./14 Ga. CRS (Opt'l)

FINISH: ☐ Baked Powder Prime
☐ Baked Powder Color (Opt'l)
☐ 18 Ga./20 Ga. SS (Opt'l)
☐ 18 Ga./18 Ga. SS (Opt'l)
☐ 16 Ga./20 Ga. SS (Opt'l)
☐ 16 Ga./18 Ga. SS (Opt'l)
☐ 16 Ga./16 Ga. SS (Opt'l)

ELEMENT:

COIL: Bronze Header 3/4" NPT
w/Copper Tube/Alum Fins
(Mechanically Expanded).

HEADER CONNECTIONS:

☐ Single Header Both Ends (Std)
☐ Single Inlet 1 End / Dual Inlet
1 End (Opt'l)
☐ Dual Inlet Both Ends (Opt'l)

☐ SFG-A Louvered Inlet

OPTIONAL ACCESSORIES:

DAMPER: Damper Blades Factory Installed
☐ Knob Damper (Opt'l)
☐ Tamper Resistant (Opt'l)

ACCESS DOORS:

☐ (Opt'l)

INSULATION:

☐ Back Only (Opt'l)
☐ Back, Sides, Top (Opt'l)

PIPING KNOCKOUT:

☐ (Opt'l)

4" END POCKETS:

☐ LH (Opt'l)
☐ RH (Opt'l)
☐ Both Ends (Opt'l)

PERFORATED FRONT: Consult Factory

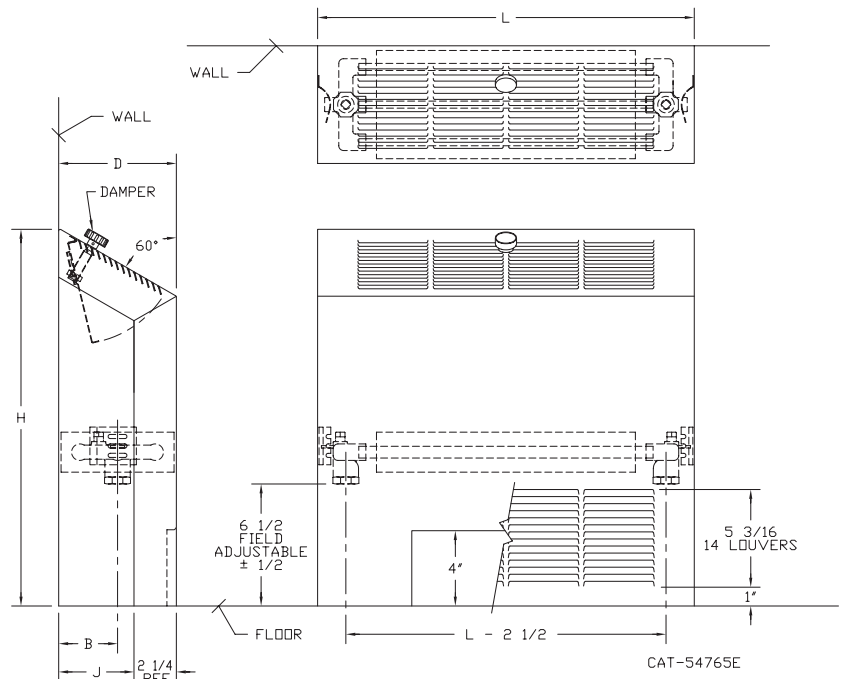
☐ 16 Ga. (Opt'l)
☐ 14 Ga. (Opt'l)

☐ SF-A Open Inlet

☐ SFG-A Louvered Inlet

TYPE SF-A / SFG-A

MODEL	D	L	H	B	J
4xx-18	4-1/4	20,24,28,	18	2-1/8	2
4xx-20		32,36,40,	20		
4xx-24		44,48,52,	24		
4xx-26		56,60,64,	26		
4xx-32			32		
6xx-18	6-1/4	20,24,28,	18	3-1/8	4
6xx-20		32,36,40,	20		
6xx-24		44,48,52,	24		
6xx-26		56,60,64,	26		
6xx-32			32		
8xx-18	8-1/4	20,24,28,	18	4-1/8	6
8xx-20		32,36,40,	20		
8xx-24		44,48,52,	24		
8xx-26		56,60,64,	26		
8xx-32			32		



NOTE: When adding end pockets, liner and front length increase.



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www.airthermhvac.com



PROJECT: _____ DATE: _____
LOCATION: _____
ARCHITECT: _____
ENGINEER: _____
CONTRACTOR: _____
PO NUMBER: _____

STEAM RATINGS IN BTU/H (215°F at 65°F EAT)

DEPTH IN INCHES	LENGTH IN INCHES	SLOPE TOP, FREE STANDING, NOMINAL HEIGHT *TYPE SF-A				
		18"	20"	24"	26"	32"
4	20	2810	2930	3120	3215	3335
	24	3600	3720	3960	4080	4250
	28	4320	4490	4775	4895	5110
	32	5110	5305	5640	5760	6050
	36	5905	6070	6455	6625	6960
	40	6650	6840	7320	7510	7850
	44	7345	7630	8135	8350	8735
	48	8135	8400	8975	9190	9625
	52	8830	9145	9745	9935	10440
	56	9625	9935	10655	10850	11400
	60	10250	10705	11400	11615	12190
	64	10990	11495	12310	12530	13150
6	20	4370	4510	4970	5090	5425
	24	5425	5710	6290	6480	6960
	28	6530	6890	7560	7750	8330
	32	7535	8110	8905	9120	9840
	36	8905	9290	10175	10490	11255
	40	9985	10490	11470	11810	12670
	44	11185	11665	12790	13105	14160
	48	12335	12840	14040	14470	15550
	52	13535	14015	15290	15720	16895
	56	14950	15215	16655	17135	18410
	60	15790	16345	17880	18360	19730
	64	16850	17570	19270	19775	21265
8	20	5495	5760	6120	6310	6770
	24	7200	7345	7825	8040	8665
	28	8640	8880	9410	9650	10415
	32	10225	10440	11135	11400	12310
	36	11760	12050	13250	13105	14135
	40	13200	13560	14425	14830	15985
	44	14785	15120	16030	16510	17760
	48	16320	16680	17710	17905	19610
	52	17710	18190	19250	19750	21335
	56	19370	19750	21000	21550	23255
	60	20735	21290	22510	23110	24960
	64	22390	22895	24265	24935	26880

DEPTH IN INCHES	LENGTH IN INCHES	SLOPE TOP, FREE STANDING, NOMINAL HEIGHT *TYPE SFG-A				
		18"	20"	24"	26"	32"
4	20	2726	2842	3058	3151	3302
	24	3492	3608	3881	3998	4208
	28	4190	4355	4680	4797	5059
	32	4957	5146	5527	5645	5990
	36	5728	5888	6326	6493	6890
	40	6451	6635	7174	7360	7772
	44	7125	7401	7972	8183	8648
	48	7891	8148	8796	9006	9529
	52	8565	8871	9550	9736	10336
	56	9336	9637	10442	10633	11286
	60	9943	10384	11172	11383	12068
	64	10660	11150	12064	12279	13019
6	20	4108	4239	4722	4836	5317
	24	5100	5367	5976	6156	6821
	28	6138	6477	7182	7363	8163
	32	7083	7623	8460	8664	9643
	36	8371	8733	9666	9966	11030
	40	9386	9861	10897	11220	12417
	44	10514	10965	12151	12450	13877
	48	11595	12070	13338	13747	15239
	52	12723	13174	14526	14934	16557
	56	14053	14302	15822	16278	18042
	60	14843	15364	16986	17442	19335
	64	15839	16516	18307	18786	20840
8	20	5000	5242	5692	5868	6567
	24	6552	6684	7277	7477	8405
	28	7862	8081	8751	8975	10103
	32	9305	9500	10356	10602	11941
	36	10702	10966	12323	12188	13711
	40	12012	12340	13415	13792	15505
	44	13454	13759	14908	15354	17227
	48	14851	15179	16470	16652	19022
	52	16116	16553	17903	18368	20695
	56	17627	17973	19530	20042	22557
	60	18869	19374	20934	21492	24211
	64	20375	20834	22566	23190	26074

Correction factors for BTU performance at different Average Water Temperatures, use correction factors from Table 3 of the Correction Factors page.

For other applicable correction factors see the Correction Factors page.

For assistance with ratings and selection, please use our online Specifier.

CONVECTOR BTU CORRECTION FACTORS

Table 3

CONVECTOR CORRECTION FACTORS Based on Section 35.4 ASHRAE HVAC Systems and Equipment					
AVERAGE WATER TEMPERATURE (°F)	ENTERING AIR TEMPERATURE (°F)				
	(STD)				
	55°	60°	65°	70°	75°
100°	0.17	0.14	0.12	0.09	0.07
110°	0.23	0.20	0.17	0.14	0.12
120°	0.29	0.26	0.23	0.20	0.17
130°	0.35	0.32	0.29	0.26	0.23
140°	0.43	0.39	0.35	0.32	0.29
150°	0.50	0.46	0.43	0.39	0.35
160°	0.58	0.54	0.51	0.47	0.43
170°	0.67	0.63	0.58	0.54	0.51
180°	0.76	0.71	0.67	0.63	0.58
190°	0.85	0.81	0.76	0.71	0.67
200°	0.95	0.90	0.85	0.81	0.76
210°	1.05	1.00	0.95	0.90	0.85
215° (STD)	1.10	1.05	1.00	0.95	0.90
220°	1.15	1.10	1.05	1.00	0.95
230°	1.26	1.20	1.15	1.10	1.05
240°	1.37	1.32	1.26	1.21	1.15
250°	1.47	1.43	1.37	1.32	1.27

Table 4

CORRECTION FACTORS FOR STEAM PRESSURES OTHER THAN 1 PSI GAUGE*						
FACTOR	PRESSURE PSI GAUGE					
	5	10	15	20	25	50
	1.12	1.25	1.36	1.46	1.56	1.93
*Apply factors shown above to the ratings shown on the 215°F ratings page.						

Note: Max Recommended operating pressure 150 PSIG, (365.9°F).
For conversion from steam to hot water, use correction factors shown in Table 3.

Table 5

CORRECTION FACTORS FOR ACCESS DOORS								
Length	Free Standing, Non-Recessed Non-Standard Access Door Locations				Semi-Recessed or Fully Recessed Non-Standard Access Door Locations			
	3 or 4	3 & 4	5 or 6	5 & 6	3 or 4	3 & 4	5 or 6	5 & 6
20"	0.940	0.880	0.820	0.650	0.975	0.950	0.925	0.850
24"	0.950	0.910	0.860	0.720	0.980	0.960	0.940	0.880
28"	0.960	0.920	0.890	0.770	0.982	0.968	0.948	0.902
32"	0.970	0.940	0.890	0.800	0.985	0.972	0.955	0.918
36"	0.970	0.940	0.920	0.830	0.988	0.975	0.962	0.925
40"	0.970	0.950	0.920	0.850	0.990	0.978	0.970	0.932
44"	0.980	0.950	0.930	0.860	0.990	0.980	0.970	0.940
48"	0.980	0.960	0.940	0.880	0.990	0.982	0.970	0.948
52"	0.980	0.960	0.950	0.890	0.992	0.985	0.978	0.955
56"	0.980	0.960	0.950	0.890	0.992	0.985	0.978	0.955
60"	0.980	0.970	0.950	0.900	0.992	0.985	0.978	0.955
64"	0.980	0.970	0.950	0.910	0.992	0.988	0.978	0.962

Note: Derating factors do not apply to units with end pockets.

Table 6

WATER FLOW IN GPM	PRESSURE LOSS IN FEET OF WATER		
	4 INCH MODELS	6 INCH MODELS	8 INCH MODELS
.25	0.044	—	—
.50	0.160	0.070	0.046
1	0.597	0.270	0.167
2	2.220	1.047	0.616
3	—	2.260	1.367
4	—	3.793	2.380
5	—	—	3.673

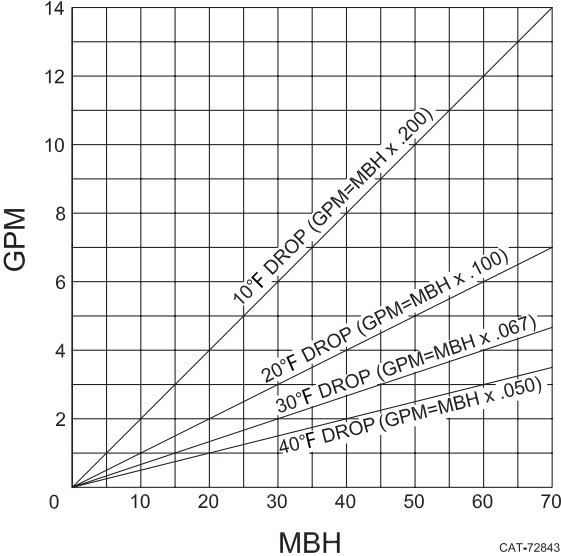
Charted figures showing pressure drop through Convectors with forced hot water. Used for determining pressure head requirement. Based on 64" length units, but applicable to shorter units, as most loss is due to headers.

ADDITIONAL CORRECTION FACTORS ON NEXT PAGE

CONVECTOR BTU CORRECTION FACTORS

GALLONS PER MINUTE OF HOT WATER REQUIRED

Table 7



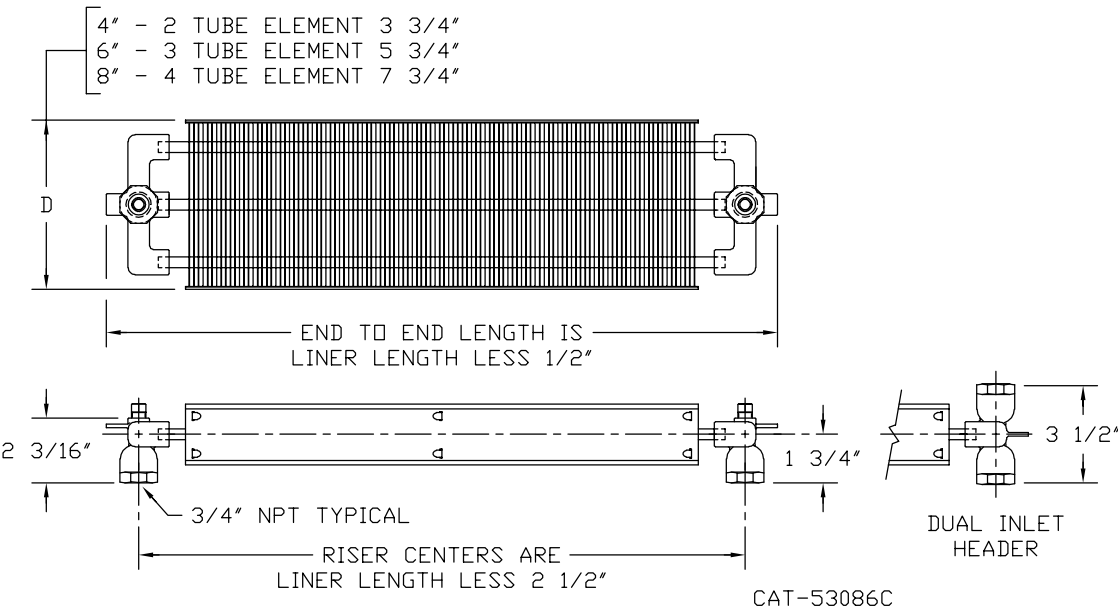
OUTPUT-FLOW RATE CORRECTIONS

Table 8

Convactor Depth	Tubes per Element	Min. Flow Rate (0.25 Ft./Sec.) GPM	MBH Based on T.D. & Min. Flow Rate			
			10TD	20TD	30TD	40TD
4"	2	.15	0.750	1,500	2,250	3,000
6"	3	.225	1.125	2,250	3,375	4,500
8"	4	.30	1.500	3,000	4,500	6,000

NOTE: Table 8 shows MBH which result at specific water temperature drops and minimum water flow rates which are required to maintain turbulent flow within element tubes.

CONVECTOR COIL



NOTE: When ordering convectors with end pockets always refer to the standard unit length. The overall physical length will increase by 4" for each end pocket. The coil length will remain the standard size. Coil fins are 2-1/2" high by width shown above and are mechanically bonded to copper tube at 6 fins per inch.

