

# CONVECTOR

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

## Submittal

### Specification

SF-A Arched 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:  Prime Finish Std.  
 Baked Enamel (Opt'l)

*SFG-A only*

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**

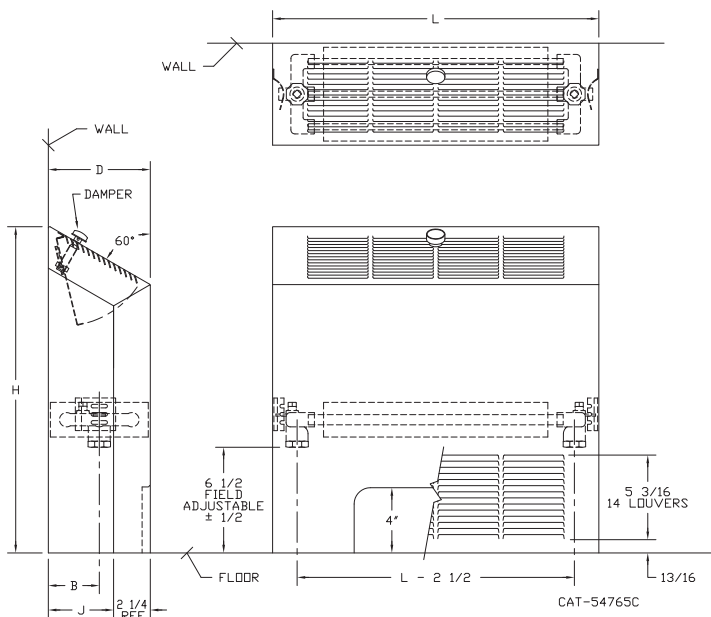
16 Ga. (Opt'l)  
 14 Ga. (Opt'l)

SF-A Arched Inlet

SFG-A Louvered Inlet

**TYPE SF-A / SFG-A**

TABLE					
MODEL	D	H	L	B	J
418	4-1/4	18	20,24,28,	2-1/8	2
420		20	32,36,40,		
424		24	44,48,52,		
426		26	56,60,64,		
432		32			
618	6-1/4	18	20,24,28,	3-1/8	4
620		20	32,36,40,		
624		24	44,48,52,		
626		26	56,60,64,		
632		32			
818	8-1/4	18	20,24,28,	4-1/8	6
820		20	32,36,40,		
824		24	44,48,52,		
826		26	56,60,64,		
832		32			



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



260 North Elm St.  
Westfield, MA 01085  
(413) 562-5423  
Fax: (413) 572-3764  
www.beacon-morris.com



PROJECT: \_\_\_\_\_ DATE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

ARCHITECT: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

PO NUMBER: \_\_\_\_\_

## STEAM RATINGS IN BTU/H (215°F at 65° E.A.T.)

DEPTH IN INCHES	LENGTH IN INCHES	SLOPE TOP, FREE STANDING, NOMINAL HEIGHT *TYPE SF-A				
		18"	20"	24"	26"	32"
<b>4</b>	20	2810	2930	3120	3220	3340
	24	3600	3740	3980	4080	4250
	28	4320	4490	4780	4900	5110
	32	5110	5330	5640	5760	6050
	36	5900	6100	6460	6620	6960
	40	6650	6860	7320	7510	7850
	44	7340	7660	8140	8350	8740
	48	8140	8450	8980	9190	9620
	52	8830	9140	9740	9940	10440
	56	9620	9980	10660	10870	11420
	64	10990	11540	12340	12530	13180
<b>6</b>		<b>18"</b>	<b>20"</b>	<b>24"</b>	<b>26"</b>	<b>32"</b>
	20	4370	4510	4970	5090	5470
	24	5420	5740	6290	6530	6960
	28	6530	6890	7540	7750	8330
	32	7540	8140	8900	9120	9840
	36	8900	9340	10200	10490	11280
	40	9980	10540	11500	11810	12700
	44	11180	11710	12820	13130	14160
	48	12340	12890	14020	14500	15580
	52	13540	14020	15290	15720	16900
	64	16850	17640	19300	19780	21310
<b>8</b>		<b>18"</b>	<b>20"</b>	<b>24"</b>	<b>26"</b>	<b>32"</b>
	20	5500	5760	6120	6310	6770
	24	7200	7390	7850	8060	8660
	28	8640	8880	9410	9650	10420
	32	10220	10510	11160	11420	12340
	36	11760	12140	13780	13130	14140
	40	13200	13660	14450	14860	16010
	44	14780	15220	16060	16540	17780
	48	16320	16780	18100	17710	19660
	52	17710	18190	19250	19750	21340
	64	22390	22990	24310	24960	26930

Correction factors for BTU performance from Table 7 must be applied to all units with louvered Inlet.

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.

# CONVECTOR BTU CORRECTION FACTORS

**Table 3**

<b>CONVECTOR CORRECTION FACTORS</b> Based on ASHRAE HVAC Systems and Equipment					
AVERAGE WATER TEMPERATURE F°	ENTERING AIR TEMPERATURES °F				
	▼				
	55°	60°	STD. 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**

<b>CORRECTION FACTORS FOR STEAM PRESSURES OTHER THAN 1 PSI GAUGE*</b>						
	PRESSURE PSI GAUGE					
	5	10	15	20	25	50
<b>FACTOR</b>	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**

<b>DERATING PERCENTAGE REDUCTION TABLE</b>									
Length "L"	Free Standing, Non-Recessed Non-Standard Access Door Locations				Semi-Recessed or 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	5 & 6
	20	6%	12%	18%	35%	2.5%	5%	7.5%	15%
24	5	9	14	28	2	4	6	12	
28	4	8	11	23	1.8	3.2	5.2	9.8	
32	3	6	11	20	1.5	2.8	4.5	8.2	
36	3	6	8	17	1.2	2.5	3.8	7.5	
40	3	5	8	15	1	2.2	3	6.8	
44	2	5	7	14	1	2	3	6	
48	2	4	6	12	1	1.8	3	5.2	
52	2	4	5	11	.8	1.5	2.2	4.5	
56	2	4	5	11	.8	1.5	2.2	4.5	
60	2	3	5	10	.8	1.5	2.2	4.5	
64	2	3	5	9	.8	1.2	2.2	3.8	

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

**Table 6**

WATER FLOW IN G.P.M.	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.

**Table 7**

<b>DERATING FACTORS FOR INLET GRILLES</b>			
TYPES: FSG-A, SRG-A, RFG-A, FWG-A, PWG-A, SFG-A			
HEIGHT	DEPTH		
	4	6	8
20	3%	6%	9%
24	2%	5%	7%
32	1%	2%	3%

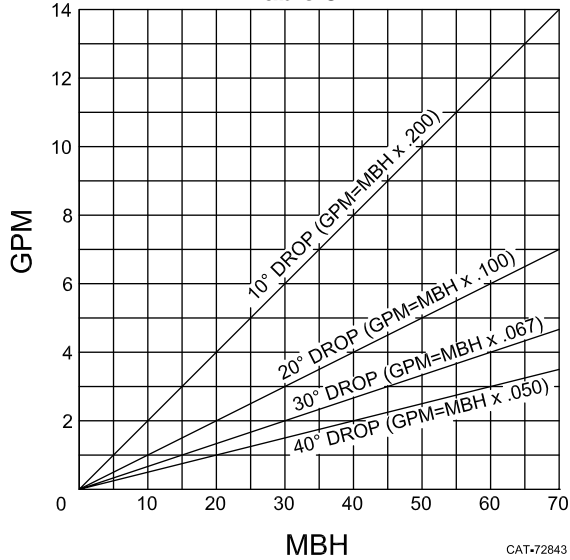
Due to the restriction to air flow, the percentages should be subtracted from the BTU output when inlet grilles are specified.

**ADDITIONAL CORRECTION FACTORS  
ON NEXT PAGE**

# CONVECTOR BTU CORRECTION FACTORS

GALLONS PER MINUTE OF HOT WATER REQUIRED

Table 8



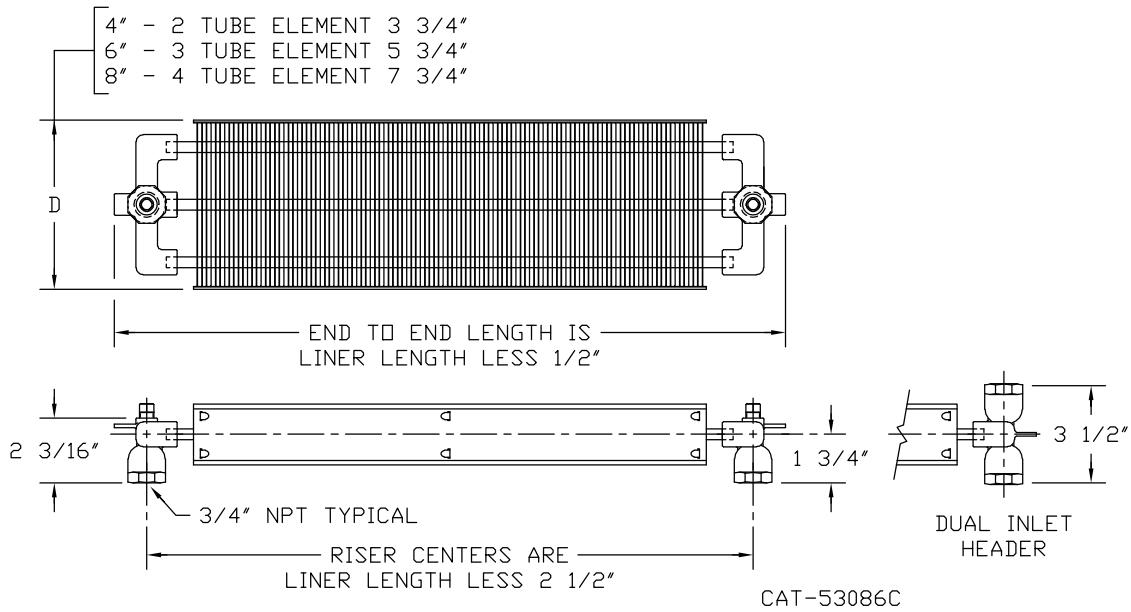
OUTPUT-FLOW RATE CORRECTIONS

Table 9

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 9 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.

