

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)
 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

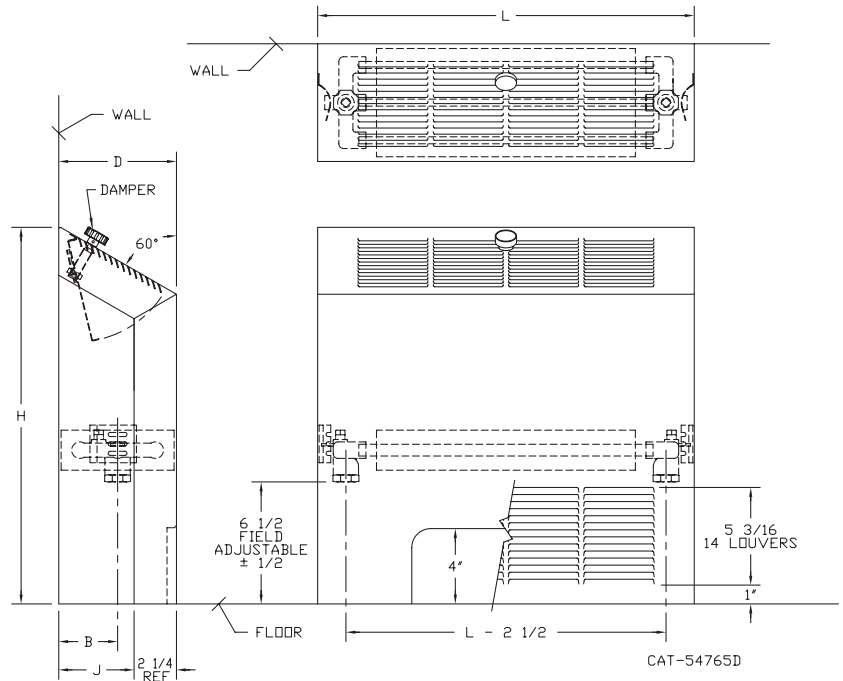
16 Ga. (Opt'l)
 14 Ga. (Opt'l)

SF-A Arched Inlet

SFG-A Louvered Inlet

TYPE SF-A / SFG-A

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.



260 North Elm St., Westfield, MA 01085
(800) 762-5005 Fax: (413) 572-3764
www.turbonicsinc.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	

* 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

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*						
	PRESSURE PSI GAUGE					
	5	10	15	20	25	50
FACTOR	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
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.

Table 7

CORRECTION FACTORS FOR INLET GRILLES TYPES: FSG-A, SRG-A, RFG-A, FWG-A, PWG-A, SFG-A			
DEPTH	HEIGHT		
	16", 18", 20"	22", 24", 26"	28", 30", 32"
4"	0.97	0.98	0.99
6"	0.94	0.95	0.98
8"	0.91	0.93	0.97

Due to the restriction to air flow, the correction factor should be multiplied to 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



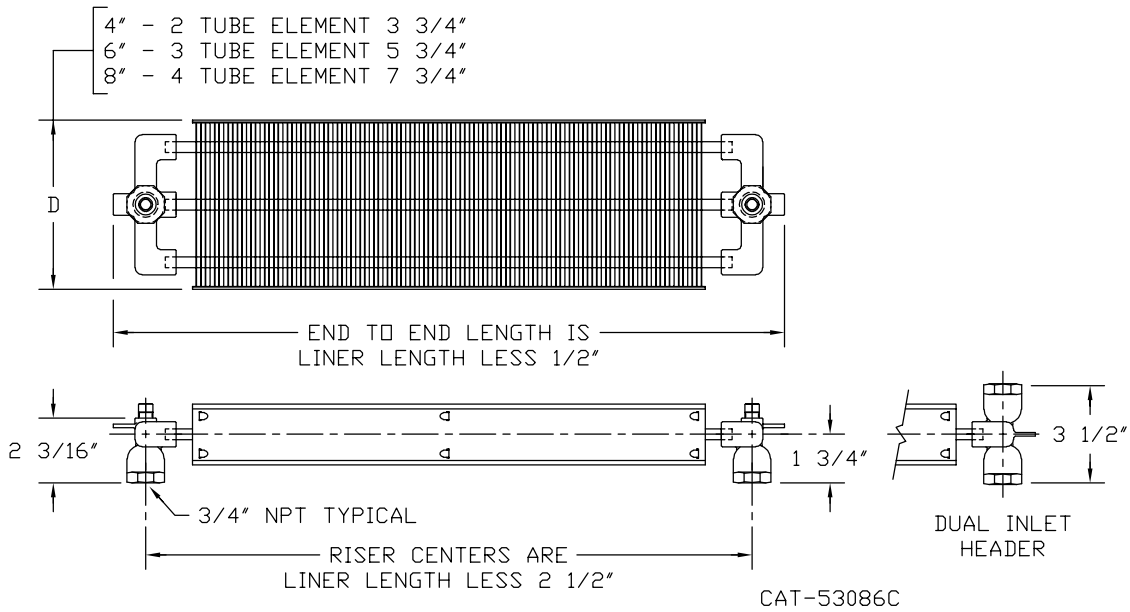
OUTPUT-FLOW RATE CORRECTIONS

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.

