

CONVECTOR

Submittal

W-A
Flat Top Cabinet
Wall Mounted

Specification

W-A Bottom Inlet

FRONT and LINER:

STYLE: Front 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)

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)

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)

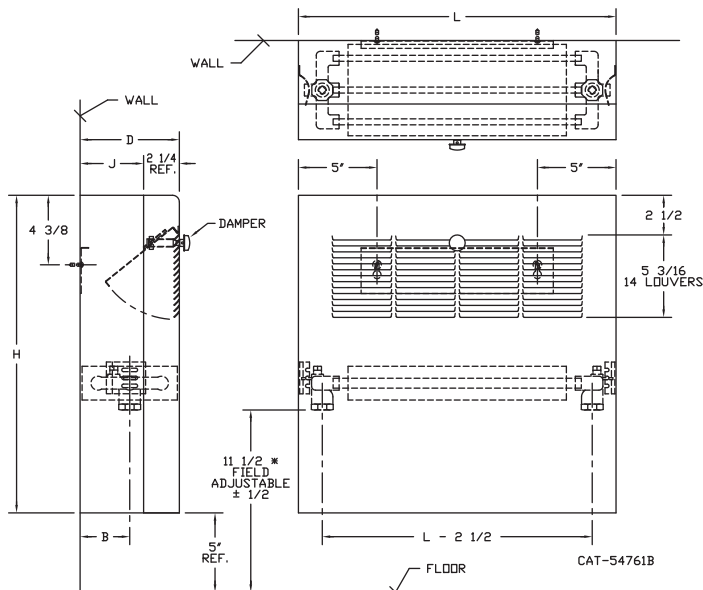
4" END POCKETS:
 LH (Opt'l)
 RH (Opt'l)
 Both Ends (Opt'l)

PERFORATED FRONT: Consult Factory
 16 Ga. (Opt'l)
 14 Ga. (Opt'l)

W-A Bottom Inlet

TYPE W-A

TABLE					
MODEL	D	H	L	B	J
414	4-1/4	14	20,24,28,	2-1/8	2
418		18	32,36,40,		
420		20	44,48,52,		
426		26	56,60,64,		
432		32			
614	6-1/4	14	20,24,28,	3-1/8	4
618		18	32,36,40,		
620		20	44,48,52,		
626		26	56,60,64,		
632		32			
814	8-1/4	14	20,24,28,	4-1/8	6
818		18	32,36,40,		
820		20	44,48,52,		
826		26	56,60,64,		
832		32			



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



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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	FRONT OUTLET, WALL MOUNTED, NOM. HEIGHT TYPE W-A				
		14"	18"	20"	26"	32"
4	20	2500	2830	2900	3120	3260
	24	3170	3620	3720	3980	4150
	28	3820	4340	4460	4780	5040
	32	4510	5110	5280	5660	5950
	36	5160	5880	6020	6500	6860
	40	5860	6620	6820	7340	7730
	44	6500	7420	7580	8160	8640
	48	7130	8140	8380	9000	9530
	52	7800	8860	9070	9740	10340
	56	8500	9650	9890	10630	11300
	60	9120	10340	10610	11400	12120
	64	9820	11160	11420	12310	13080
6		14"	18"	20"	26"	32"
	20	3620	4250	4390	4850	5040
	24	4580	5400	5590	6170	6410
	28	5520	6480	6670	7370	7660
	32	6530	7630	7900	8710	9020
	36	7440	8740	9050	9960	10340
	40	8400	9840	10220	11260	11660
	44	9340	10940	11380	12530	12980
	48	10300	12070	12480	13750	14300
	52	11180	13100	13540	14900	15500
	56	12190	14280	14760	16250	16920
	60	13060	15310	15840	17420	18140
64	14060	16490	17090	18790	19580	
8		14"	18"	20"	26"	32"
	20	4540	5040	5140	5570	5810
	24	5810	6380	6580	7100	7460
	28	6960	7680	7900	8520	8930
	32	8230	9050	9360	10080	10560
	36	9460	10440	10730	11570	12120
	40	10700	11780	12120	13100	13660
	44	11900	13130	13490	14590	15190
	48	12910	14470	14880	16150	16800
	52	14230	15670	16100	17420	18140
	56	15580	17140	17640	19030	19850
	60	16660	18340	18840	20380	21220
64	17980	19800	20400	21980	22900	

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 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

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

DERATING PERCENTAGE REDUCTION TABLE									
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

DERATING FACTORS FOR INLET GRILLES			
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%

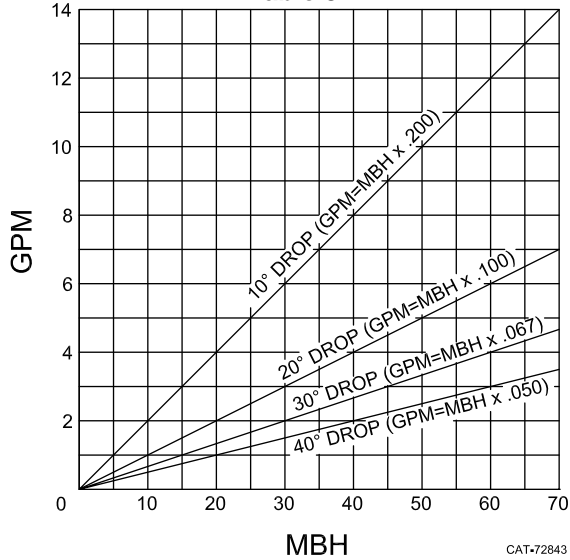
Due to the restriction to air flow, the percentages should be subtracted from the BTU output when inlet grilles are specified.

**ADDITIONAL CORRECTION FACTORS
ON NEXT PAGE**

CONVECTOR BTU CORRECTION FACTORS

GALLONS PER MINUTE OF HOT WATER REQUIRED

Table 8



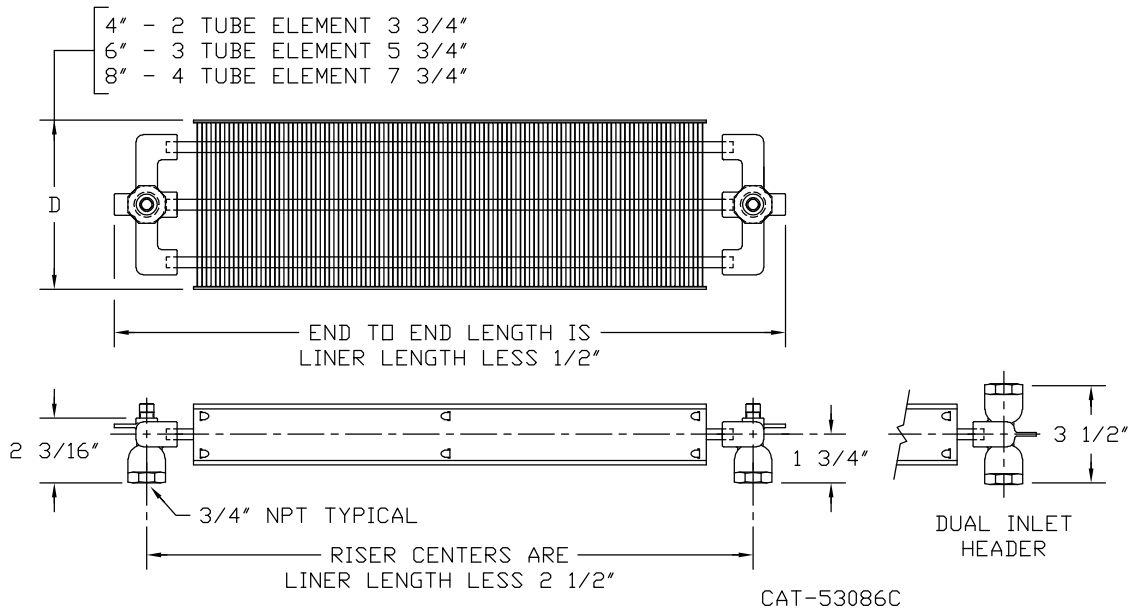
OUTPUT-FLOW RATE CORRECTIONS

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.

