CONVECTOR

Submittal

SW-A
Slope Top Cabinet
Wall Mounted

☐ **SW-A Bottom Inlet**

Specification

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)

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)

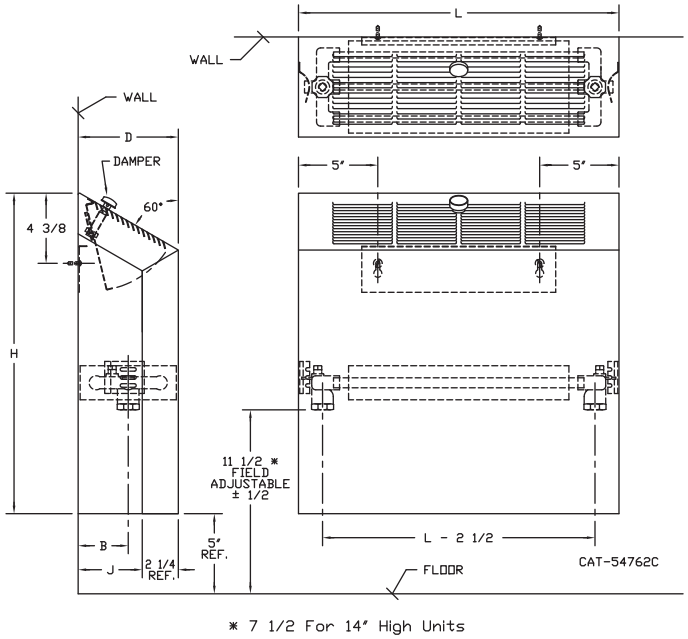
4" END POCKETS:
☐ LH (Opt'l)
☐ RH (Opt'l)
☐ Both Ends (Opt'l)

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

☐ SW-A Bottom Inlet

TYPE SW-A

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



* 7 1/2 For 14" High Units

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

Beacon/Morris®
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Westfield, MA 01085
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Fax: (413) 572-3764
www.beacon-morris.com
MADE IN THE USA

04/12

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

RESET RESET RESET RESET RESET RESET RESET

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

DEPTH IN INCHES	LENGTH IN INCHES	SLOPE TOP, WALL MOUNTED, NOMINAL HEIGHT **TYPE SW-A**				
		☐ **14"**	☐ **18"**	☐ **20"**	☐ **26"**	☐ **32"**
☐ **4**	☐ 20	2930	3120	3220	3340	3500
	☐ 24	3700	3940	4060	4250	4420
	☐ 28	4490	4780	4900	5110	5300
	☐ 32	5260	5620	5760	6020	6290
	☐ 36	6050	6460	6620	6940	7250
	☐ 40	6790	7300	7490	7820	8110
	☐ 44	7580	8140	8350	8710	9070
	☐ 48	8350	8950	9190	9600	9980
	☐ 52	9140	9740	9940	10440	10850
	☐ 56	9890	10630	10820	11350	11830
	☐ 60	10700	11400	11620	12140	12820
	☐ 64	11420	12290	12530	13130	13920
		☐ **14"**	☐ **18"**	☐ **20"**	☐ **26"**	☐ **32"**
☐ **6**	☐ 20	4510	4940	5090	5350	5690
	☐ 24	5690	6260	6430	6940	7180
	☐ 28	6890	7560	7750	8330	8690
	☐ 32	8060	8880	9100	9820	10130
	☐ 36	9240	10150	10460	11230	11620
	☐ 40	10420	11450	11780	12650	13150
	☐ 44	11590	12770	13080	14140	14660
	☐ 48	12770	14060	14450	15530	16100
	☐ 52	14020	15290	15720	16900	17590
	☐ 56	15120	16610	17110	18380	19150
	☐ 60	16340	17880	18360	19730	20570
	☐ 64	17470	19220	19750	21220	22080
		☐ **14"**	☐ **18"**	☐ **20"**	☐ **26"**	☐ **32"**
☐ **8**	☐ 20	5760	6100	6290	6770	7030
	☐ 24	7270	7780	8020	8640	9000
	☐ 28	8880	9410	9650	10420	10820
	☐ 32	10370	11090	11350	12260	12790
	☐ 36	11950	12720	13080	14110	14690
	☐ 40	13460	14380	14780	15940	16580
	☐ 44	15020	16010	16460	17710	18430
	☐ 48	16580	17660	18100	19560	20380
	☐ 52	18190	19250	19750	21340	22220
	☐ 56	19630	20950	21480	23230	24220
	☐ 60	21290	22510	23110	24960	26040
	☐ 64	22800	24220	24890	26830	28010

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*						
	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

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
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%

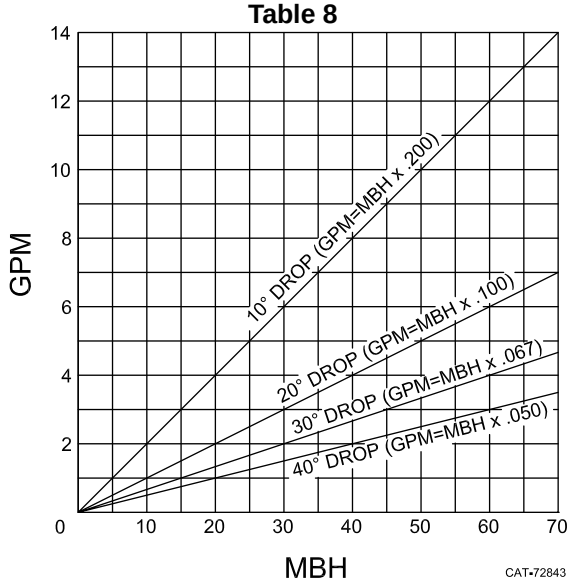
Due to the restriction to air flow, the percentages should be subtracted from the BTU output when inlet grilles are specified.

ADDITIONAL CORRECTION FACTORS ON NEXT PAGE

CONVECTOR BTU CORRECTION FACTORS

GALLONS PER MINUTE OF HOT WATER REQUIRED

Table 8



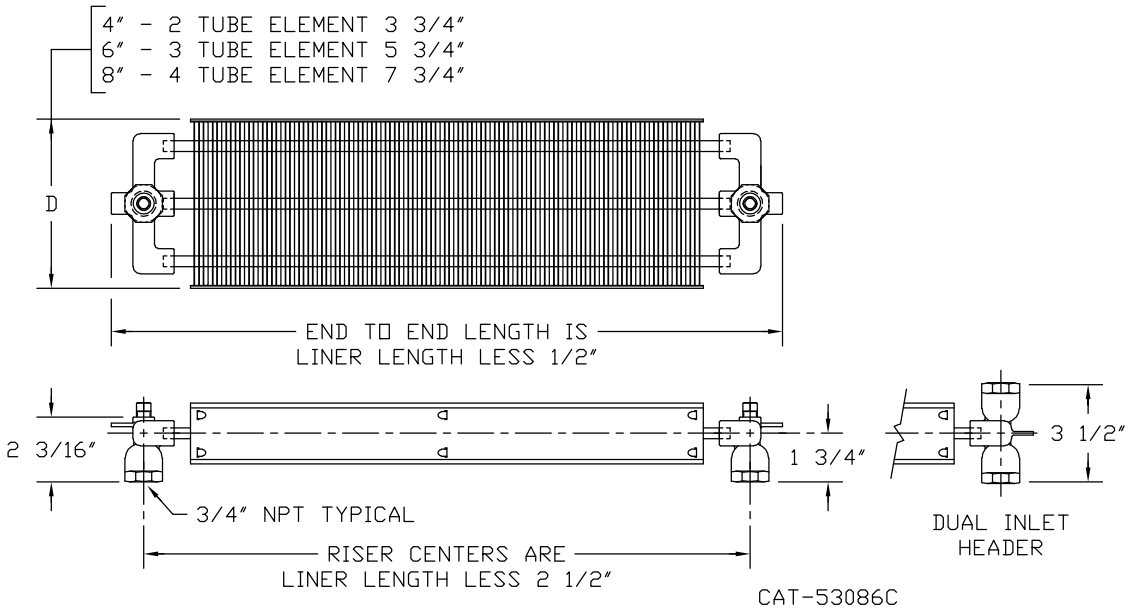
OUTPUT-FLOW RATE CORRECTIONS

Table 9

		Min. Flow Rate (0.25 Ft./Sec.)	MBH Based on T.D. & Min. Flow Rate			
Convector Depth	Tubes per Element	GPM	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 2½" high by width shown above and are mechanically bonded to copper tube at 6 fins per inch.