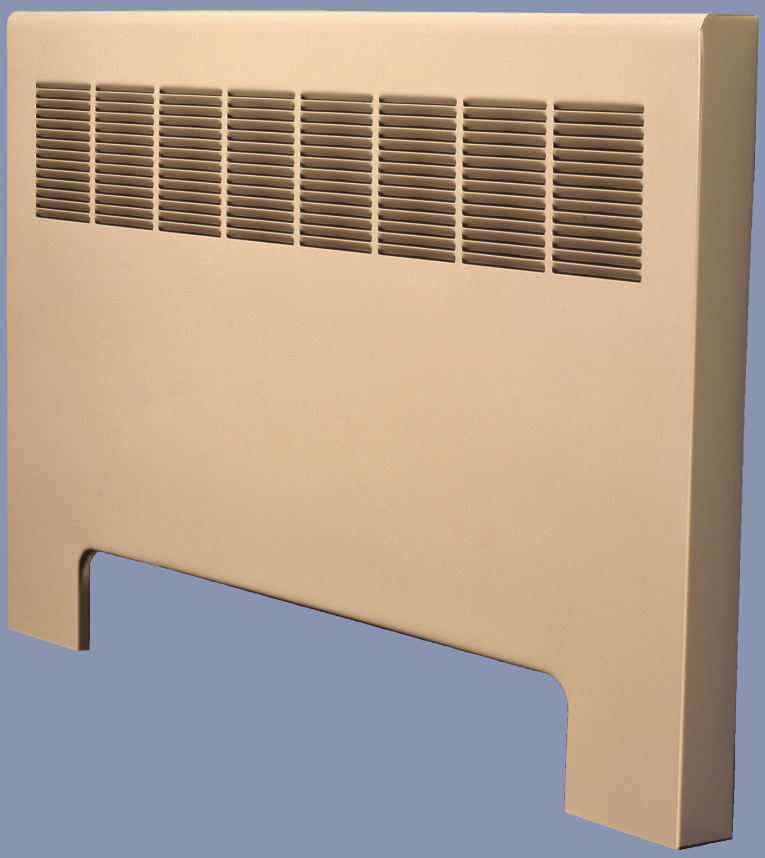


Convector

Steam and Hot Water Unit Heaters

Turbonics INC.

MADE IN THE USA

Convector Radiation

Turbonics Convectors are engineered for both forced hot water and two-pipe steam heating system installation with heating elements of lightweight non-ferrous construction. They are available in (7) basic types to meet a wide range of heating applications in institutional buildings, hospitals, hotels, office buildings, schools, apartments and other structures. A variety of cabinet enclosure styles permits the selection of an attractive and functional installation to blend with any building interior — modern or traditional.

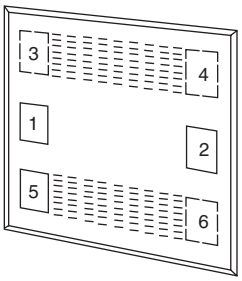
Designed for maximum flexibility of installation arrangement, Turbonics Convectors are available in free-standing, semi-recessed, wall hung and fully recessed models. Enclosures are formed from heavy-gauge steel, and finished in prime coat for complete protection against corrosion during shipment and providing a base for final finish to meet architectural requirements after installation.

All Turbonics Convectors are made from recycled materials. Recycled material contents can be obtained from your local representative or by viewing our web site at www.beacon-morris.com. Turbonics is a participating member of USGBC-LEEDS.

END POCKET

End Pockets — End pockets may be provided at each or either end of Turbonics institutional convectors to protect and conceal valves, traps and piping. A left-hand end pocket is illustrated. The liner is extended and a baffle welded to the back of the liner. The cabinet front is extended and grille is offset in length to line up with heating element. Length of end pocket is determined by using a standard element. Specify right or left hand. Available in 4" increments only. One end pocket only on 64" long units. No end pockets available on SR-A or RF-A 64" units.
Note: Fronts and liners increase in length but the coil length remains the same.

Access Doors — Access Doors (4 1/4" square) may be provided in the front panel of the convectors for inspection or operation of valves, traps, or air vents. These doors are hinged on top. Concealed 1/4 turn locking device is provided with an Allen-head operator. Access doors are available in the standard locations illustrated. For units 24" or less in height, not all positions are available, consult factory. See table 5 on page 12 for derating factors.



ACCESS DOOR LOCATIONS

Heating Elements — Heating elements are available in three nominal depths — 4" with 2-tube element, 6" with 3-tube element, 8" with 4-tube element. Fins of .010" aluminum have integral collars to assure uniform spacing. Tubes are mechanically expanded into collars to permit maximum heat transfer. Both headers are cast brass with single - 3/4" NPT tappings. A dual top and bottom 3/4" tapped header is available. This option allows for supply and return piping to come from the top or bottom. Combined with the standard single header, piping direction is no longer a problem. Heating element assembly is protected by formed shield plates front and back running the entire length of element, and supported in enclosure by a welded bracket to eliminate strain on piping or element.

Tamper-Resistant Fasteners — Our Convectors are provided with friction fit slip joiners. Hex Head Locks, to fasten fronts securely may be provided on special applications.

Concealed Fasteners — are available with Hex-head operator. Head of operator recessed 1/8" inside cabinet. Fastener engages keeper, spot welded to inside of liner.

STANDARD FASTENER FOR RECESSED UNITS

Damper — The assembly consists of a triple lead screw and a heavy gauge damper blade, flanged top and bottom for additional rigidity, that covers the entire louvered area of the enclosure.

Damper assemblies are available with either a knob operator or a tamper resistant operator which is simply operated with a hex key. The later is particularly valuable in school or institutional work where only supervisory operation is desired.

Institutional convectors are specially constructed to satisfy the requirements of strength and safety demanded by institutional building application.

Heavy Gauge Steel — To withstand the abuse often received on this type of application, institutional convectors are available in heavy gauge steel upon specific request. (Front and back available in 18, 16 and 14-gauge)

Perforated Outlet and/or Inlet — Consult factory for unit styles offered with 14-gauge perforated front panels.

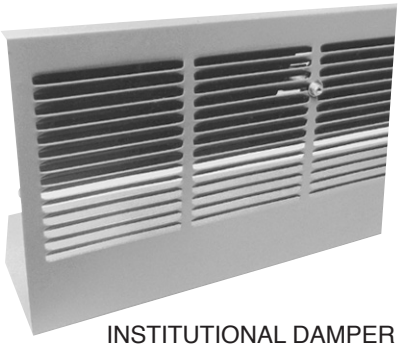
KNOB OPERATED DAMPER OPTION

Dual Inlet Header — Allows piping from either top or bottom.

Non-Standard Sizes — Sizes other than standard can be provided for institutional buildings. Please consult factory with requirements.

Insulation — 1/2" thick fiber-glass insulation is available on convector backs, or sides and tops for special application. (Top does not apply to sloping models)

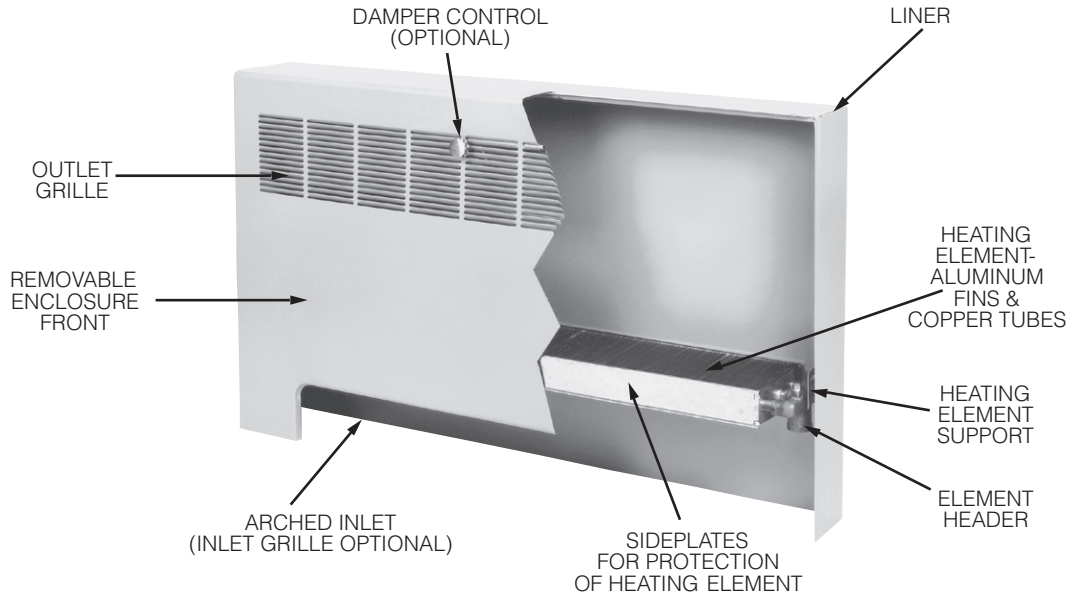
Special Finish — All our Convectors are thoroughly cleaned after fabrication and provided with a high quality baked enamel prime coat paint. As an option, cabinet may be finished in one of the standard Convector colors also in baked enamel.



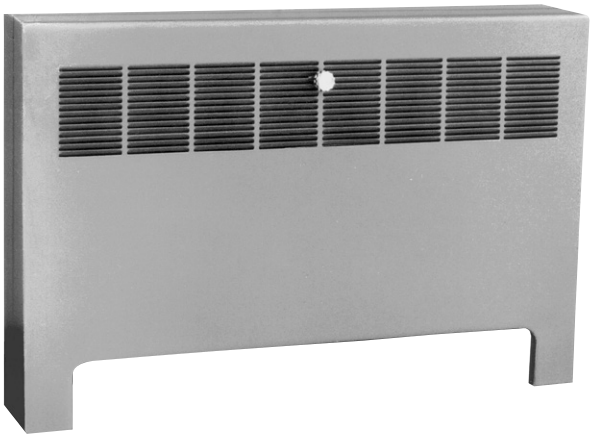
INSTITUTIONAL DAMPER OPERATOR

ENCLOSURES

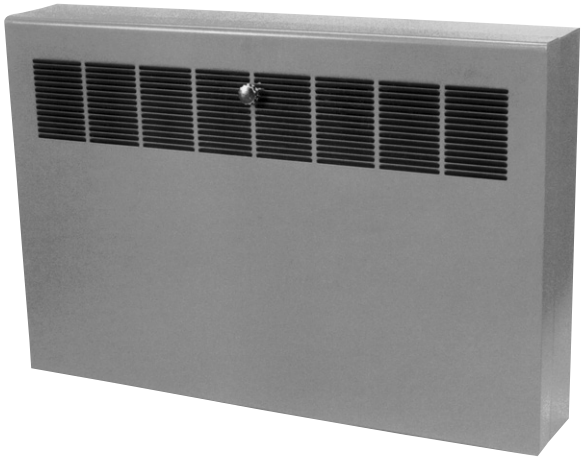
Features of enclosure construction are shown below. Note that the element support provides a simple and inexpensive means of leveling the heating element or giving it an appropriate pitch for steam installation. Enclosures are formed steel with front of 18-gauge, back and sides of 20-gauge thickness. Enclosure fronts are separate and fastened by friction fit slip joiners at sides of the front piece. Back, top and sides are an integral welded structure in all models, except wall hung slope top model, which has top integral with front. Design details of individual units are shown on succeeding pages.



Types of Convectors

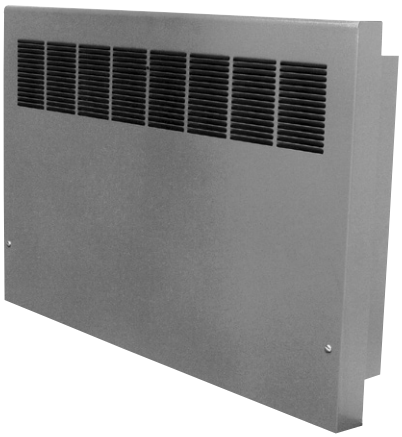


FS-A/FSG-A
Type FS-A: The type FS-A Free-Standing Cabinet Enclosure is designed to be used exposed and fitted flush against the wall. Readily installed without alteration of wall interior, the FS-A enclosure is frequently used for system modernization where it is desirable to avoid the expense of recessing the unit in the wall. Arched inlet shown is standard. Unit may be provided with integral inlet grille, (FSG-A). See page 14.



W-A
Type W-A: The W-A Convector is a completely exposed wall hung unit with flat top. Outlet grille is in the face of the enclosure. Enclosure front wraps around unit and fastens to sides of cabinet with clips. Air inlet is through open bottom of unit enclosure. See page 15.

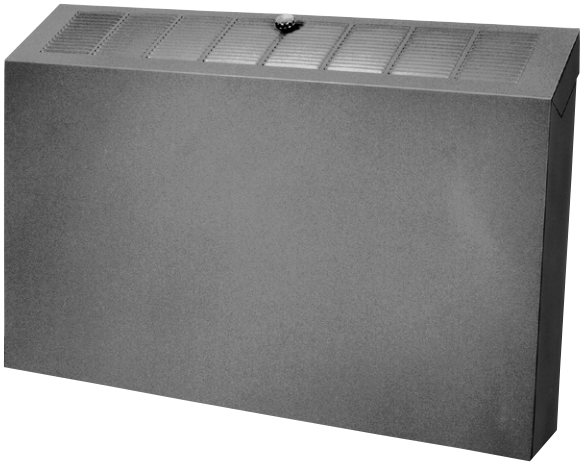
SR-A/SRG-A
Type SR-A Semi-Recessed: Cabinet design is similar to FS-A model. Enclosure projects only 2 1/4" from wall. Complete unit includes enclosure, front panel with outlet grille and arched inlet opening heating element. Front panel is easily removed for cleaning or access to heating element. Unit may be provided with integral inlet grille, (SRG-A). See page 16.



PW-A/PWG-A
Type PW-A: This is a partially recessed unit with rounded flange front and venetian type air outlet grille, standard for wall mounting as illustrated. Cabinet extends only 2 1/4" from wall. Enclosure front fastens and screw to brackets on unit liner installed in wall recess. Air inlet is through open bottom of unit (PW-A). Unit may be provided with integral inlet grille, (PWG-A). See page 17.

Types of Convectors

SF-A/SFG-A
Type SF-A: The Type SF-A Free-Standing Cabinet Enclosure is designed to be used exposed and fitted flush against the wall. Readily installed without alteration of wall interior, the SF-A enclosure is frequently used for system modernization where it is desirable to avoid the expense of recessing the unit in the wall. Arched inlet shown is standard. Unit may be provided with integral inlet grille, (SFG-A). See page 18. (SFG-A available in stainless steel, consult factory).



SW-A
Type SW-A: This model is fully exposed wall hung with outlet grille located in sloping top. Enclosure wraps around unit and fastens to sides with clips. Air inlet is through open bottom of unit. Slope of top is 30°. See page 15. Consult factory for availability with stainless steel.

RF-A/RFG-A AND FWG-A
Type RF-A: Designed to be fully recessed within the wall. The flanged edge metal front contains the outlet grille and inlet opening and is fastened by screws. It is easily removable for heating element access. The standard unit is arranged for floor mounting with arched inlet opening, (RF-A).
Unit may be provided with integral inlet grille (RFG-A shown).
Type FWG-A unit is similar, but for wall mounting with integral inlet grille. All units extend 13/16" from wall. See pages 19 & 20. Consult factory for availability of FWG-A and RFG-A models in stainless steel.

Convector Steam Ratings

TABLE 1 **STEAM RATINGS IN EDR (215°F AT 65°F EAT)**

DEPTH IN INCHES	LENGTH IN INCHES	FRONT OUTLET, NOMINAL LINER HEIGHT *TYPES FS-A, SR-A, RF-A, PW-A					FRONT OUTLET, WALL MOUNTED, NOMINAL HEIGHT TYPE W-A				
		18"	20"	24"	26"	32"	14"	18"	20"	26"	32"
4	20	9.3	10.4	11.8	12.2	13.0	10.4	11.8	12.2	13.0	13.6
	24	11.5	13.1	15.1	15.5	16.6	13.1	15.1	15.5	16.6	17.3
	28	13.8	15.9	18.1	18.6	19.9	15.9	18.1	18.6	19.9	21.0
	32	16.1	18.7	21.3	21.9	23.6	18.7	21.3	21.9	23.6	24.8
	36	18.2	21.5	24.5	25.1	27.1	21.5	24.5	25.1	27.1	28.6
	40	20.4	24.2	27.5	28.3	30.5	24.2	27.5	28.3	30.5	32.2
	44	22.6	27.0	30.8	31.5	34.0	27.0	30.8	31.5	34.0	36.0
	48	24.8	29.6	33.8	34.8	37.4	29.6	33.8	34.8	37.4	39.7
	52	27.3	32.5	36.9	37.8	40.6	32.5	36.9	37.8	40.6	43.1
	56	29.3	35.2	40.1	41.1	44.3	35.2	40.1	41.1	44.3	47.1
	60	31.9	38.0	43.1	44.2	47.5	38.0	43.1	44.2	47.5	50.5
	64	33.9	40.8	46.4	47.5	51.2	40.8	46.4	47.5	51.2	54.5
6	20	13.5	15.1	17.7	18.3	20.2	15.1	17.7	18.3	20.2	21.0
	24	16.8	19.0	22.4	23.2	25.7	19.0	22.4	23.2	25.7	26.7
	28	20.2	23.0	27.0	27.8	30.7	23.0	27.0	27.8	30.7	31.9
	32	23.4	27.0	31.7	32.8	36.2	27.0	31.7	32.8	36.2	37.6
	36	26.8	30.8	36.2	37.6	41.4	30.8	36.2	37.6	41.4	43.1
	40	30.2	34.9	40.9	42.5	46.8	34.9	40.9	42.5	46.8	48.6
	44	33.6	38.7	45.5	47.3	52.0	38.7	45.5	47.3	52.0	54.1
	48	37.0	42.7	50.1	51.9	57.1	42.7	50.1	51.9	57.1	59.6
	52	40.6	46.6	54.6	56.4	62.1	46.6	54.6	56.4	62.1	64.6
	56	43.8	50.6	59.3	61.4	67.6	50.6	59.3	61.4	67.6	70.5
	60	47.5	54.4	63.8	66.0	72.6	54.4	63.8	66.0	72.6	75.6
	64	50.8	58.5	68.5	71.1	78.2	58.5	68.5	71.1	78.2	81.6
8	20	16.8	18.9	21.0	21.4	23.2	18.9	21.0	21.4	23.2	24.2
	24	21.3	24.0	26.5	27.4	29.6	24.0	26.5	27.4	29.6	31.1
	28	26.6	29.0	32.0	32.9	35.5	29.0	32.0	32.9	35.5	37.2
	32	31.5	34.1	37.6	38.8	41.9	34.1	37.6	38.8	41.9	44.0
	36	36.3	39.1	43.3	44.6	48.1	39.1	43.3	44.6	48.1	50.5
	40	41.1	44.3	49.0	50.3	54.4	44.3	49.0	50.3	54.4	56.9
	44	46.0	49.3	54.4	56.0	60.6	49.3	54.4	56.0	60.6	63.3
	48	49.8	53.9	60.0	61.7	67.0	53.9	60.0	61.7	67.0	70.0
	52	56.1	59.3	65.3	67.1	72.6	59.3	65.3	67.1	72.6	75.6
	56	60.9	64.6	71.2	73.2	79.2	64.6	71.2	73.2	79.2	82.7
	60	65.7	69.4	76.4	78.5	84.9	69.4	76.4	78.5	84.9	88.4
	64	69.9	74.5	82.3	84.7	91.5	74.5	82.3	84.7	91.5	95.4

TABLE 1A **STEAM RATINGS IN BTU/H (215°F AT 65°F EAT)**

DEPTH IN INCHES	LENGTH IN INCHES	FRONT OUTLET, NOMINAL LINER HEIGHT *TYPES FS-A, SR-A, RF-A, PW-A					FRONT OUTLET, WALL MOUNTED, NOMINAL HEIGHT TYPE W-A				
		18"	20"	24"	26"	32"	14"	18"	20"	26"	32"
4	20	2230	2495	2830	2930	3120	2495	2830	2930	3120	3265
	24	2760	3145	3625	3720	3985	3145	3625	3720	3985	4150
	28	3310	3815	4345	4465	4775	3815	4345	4465	4775	5040
	32	3865	4490	5110	5255	5665	4490	5110	5255	5665	5950
	36	4370	5160	5880	6025	6505	5160	5880	6025	6505	6865
	40	4895	5810	6600	6790	7320	5810	6600	6790	7320	7730
	44	5425	6480	7390	7560	8160	6480	7390	7560	8160	8640
	48	5950	7105	8110	8350	8975	7105	8110	8350	8975	9530
	52	6550	7800	8855	9070	9745	7800	8855	9070	9745	10345
	56	7030	8450	9625	9865	10630	8450	9625	9865	10630	11305
	60	7655	9120	10345	10610	11400	9120	10345	10610	11400	12120
	64	8135	9790	11135	11400	12290	9790	11135	11400	12290	13080
6	20	3240	3625	4250	4390	4850	3625	4250	4390	4850	5040
	24	4030	4560	5375	5570	6170	4560	5375	5570	6170	6410
	28	4850	5520	6480	6670	7370	5520	6480	6670	7370	7655
	32	5615	6480	7610	7870	8690	6480	7610	7870	8690	9025
	36	6430	7390	8690	9025	9935	7390	8690	9025	9935	10345
	40	7250	8375	9815	10200	11230	8375	9815	10200	11230	11665
	44	8065	9290	10920	11350	12480	9290	10920	11350	12480	12985
	48	8880	10250	12025	12455	13705	10250	12025	12455	13705	14305
	52	9745	11185	13105	13535	14905	11185	13105	13535	14905	15505
	56	10510	12145	14230	14735	16225	12145	14230	14735	16225	16920
	60	11400	13055	15310	15840	17425	13055	15310	15840	17425	18145
	64	12190	14040	16440	17065	18770	14040	16440	17065	18770	19585
8	20	4030	4535	5040	5135	5570	4535	5040	5135	5570	5810
	24	5110	5760	6360	6575	7105	5760	6360	6575	7105	7465
	28	6385	6960	7680	7895	8520	6960	7680	7895	8520	8930
	32	7560	8185	9025	9310	10055	8185	9025	9310	10055	10560
	36	8710	9385	10390	10705	11545	9385	10390	10705	11545	12120
	40	9865	10630	11760	12070	13055	10630	11760	12070	13055	13655
	44	11040	11830	13055	13440	14545	11830	13055	13440	14545	15190
	48	11950	12935	14400	14810	16080	12935	14400	14810	16080	16800
	52	13465	14230	15670	16105	17425	14230	15670	16105	17425	18145
	56	14615	15505	17090	17570	19010	15505	17090	17570	19010	19850
	60	15770	16655	18335	18840	20375	16655	18335	18840	20375	21215
	64	16775	17880	19750	20330	21960	17880	19750	20330	21960	22895

* Derating factors for inlet grilles, see Table 7. For **FWG-A** units, use ratings for FS-A units and apply derate correction factors from table 7.

Convector Steam Ratings

TABLE 2 **STEAM RATINGS IN EDR (215°F AT 65°F EAT)**

DEPTH IN INCHES	LENGTH IN INCHES	SLOPE TOP, FREE STANDING, NOMINAL HEIGHT *TYPE SF-A					SLOPE TOP, WALL MOUNTED, NOMINAL HEIGHT TYPE SW-A				
		18"	20"	24"	26"	32"	14"	18"	20"	26"	32"
4	20	11.7	12.2	13.0	13.4	13.9	12.2	13.0	13.4	13.9	14.6
	24	15.0	15.5	16.5	17.0	17.7	15.5	16.5	17.0	17.7	18.4
	28	18.0	18.7	19.9	20.4	21.3	18.7	19.9	20.4	21.3	22.1
	32	21.3	22.1	23.5	24.0	25.2	22.1	23.5	24.0	25.2	26.2
	36	24.6	25.3	26.9	27.6	29.0	25.3	26.9	27.6	29.0	30.2
	40	27.7	28.5	30.5	31.3	32.7	28.5	30.5	31.3	32.7	33.8
	44	30.6	31.8	33.9	34.8	36.4	31.8	33.9	34.8	36.4	37.8
	48	33.9	35.0	37.4	38.3	40.1	35.0	37.4	38.3	40.1	41.6
	52	36.8	38.1	40.6	41.4	43.5	38.1	40.6	41.4	43.5	45.2
	56	40.1	41.4	44.4	45.2	47.5	41.4	44.4	45.2	47.5	49.3
	60	42.7	44.6	47.5	48.4	50.8	44.6	47.5	48.4	50.8	53.4
	64	45.8	47.9	51.3	52.2	54.8	47.9	51.3	52.2	54.8	58.0
6	20	18.2	18.8	20.7	21.2	22.6	18.8	20.7	21.2	22.6	23.7
	24	22.6	23.8	26.2	27.0	29.0	23.8	26.2	27.0	29.0	29.9
	28	27.2	28.7	31.5	32.3	34.7	28.7	31.5	32.3	34.7	36.2
	32	31.4	33.8	37.1	38.0	41.0	33.8	37.1	38.0	41.0	42.2
	36	37.1	38.7	42.4	43.7	46.9	38.7	42.4	43.7	46.9	48.4
	40	41.6	43.7	47.8	49.2	52.8	43.7	47.8	49.2	52.8	54.8
	44	46.6	48.6	53.3	54.6	59.0	48.6	53.3	54.6	59.0	61.1
	48	51.4	53.5	58.5	60.3	64.8	53.5	58.5	60.3	64.8	67.1
	52	56.4	58.4	63.7	65.5	70.4	58.4	63.7	65.5	70.4	73.3
	56	62.3	63.4	69.4	71.4	76.7	63.4	69.4	71.4	76.7	79.8
	60	65.8	68.1	74.5	76.5	82.2	68.1	74.5	76.5	82.2	85.7
	64	70.2	73.2	80.3	82.4	88.6	73.2	80.3	82.4	88.6	92.0
8	20	22.9	24.0	25.5	26.3	28.2	24.0	25.5	26.3	28.2	29.3
	24	30.0	30.6	32.6	33.5	36.1	30.6	32.6	33.5	36.1	37.5
	28	36.0	37.0	39.2	40.2	43.4	37.0	39.2	40.2	43.4	45.1
	32	42.6	43.5	46.4	47.5	51.3	43.5	46.4	47.5	51.3	53.3
	36	49.0	50.2	55.2	54.6	58.9	50.2	55.2	54.6	58.9	61.2
	40	55.0	56.5	60.1	61.8	66.6	56.5	60.1	61.8	66.6	69.1
	44	61.6	63.0	66.8	68.8	74.0	63.0	66.8	68.8	74.0	76.8
	48	68.0	69.5	73.8	74.6	81.7	69.5	73.8	74.6	81.7	84.9
	52	73.8	75.8	80.2	82.3	88.9	75.8	80.2	82.3	88.9	92.6
	56	80.7	82.3	87.5	89.8	96.9	82.3	87.5	89.8	96.9	100.9
	60	86.4	88.7	93.8	96.3	104.0	88.7	93.8	96.3	104.0	108.5
	64	93.3	95.4	101.1	103.9	112.0	95.4	101.1	103.9	112.0	116.7

TABLE 2A **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					SLOPE TOP, WALL MOUNTED, NOMINAL HEIGHT TYPE SW-A				
		18"	20"	24"	26"	32"	14"	18"	20"	26"	32"
4	20	2810	2930	3120	3215	3335	2930	3120	3215	3335	3505
	24	3600	3720	3960	4080	4250	3720	3960	4080	4250	4415
	28	4320	4490	4775	4895	5110	4490	4775	4895	5110	5305
	32	5110	5305	5640	5760	6050	5305	5640	5760	6050	6290
	36	5905	6070	6455	6625	6960	6070	6455	6625	6960	7250
	40	6650	6840	7320	7510	7850	6840	7320	7510	7850	8110
	44	7345	7630	8135	8350	8735	7630	8135	8350	8735	9070
	48	8135	8400	8975	9190	9625	8400	8975	9190	9625	9985
	52	8830	9145	9745	9935	10440	9145	9745	9935	10440	10850
	56	9625	9935	10655	10850	11400	9935	10655	10850	11400	11830
	60	10250	10705	11400	11615	12190	10705	11400	11615	12190	12815
	64	10990	11495	12310	12530	13150	11495	12310	12530	13150	13920
6	20	4370	4510	4970	5090	5425	4510	4970	5090	5425	5690
	24	5425	5710	6290	6480	6960	5710	6290	6480	6960	7175
	28	6530	6890	7560	7750	8330	6890	7560	7750	8330	8690
	32	7535	8110	8905	9120	9840	8110	8905	9120	9840	10130
	36	8905	9290	10175	10490	11255	9290	10175	10490	11255	11615
	40	9985	10490	11470	11810	12670	10490	11470	11810	12670	13150
	44	11185	11665	12790	13105	14160	11665	12790	13105	14160	14665
	48	12335	12840	14040	14470	15550	12840	14040	14470	15550	16105
	52	13535	14015	15290	15720	16895	14015	15290	15720	16895	17590
	56	14950	15215	16655	17135	18410	15215	16655	17135	18410	19150
	60	15790	16345	17880	18360	19730	16345	17880	18360	19730	20570
	64	16850	17570	19270	19775	21265	17570	19270	19775	21265	22080
8	20	5495	5760	6120	6310	6770	5760	6120	6310	6770	7030
	24	7200	7345	7825	8040	8665	7345	7825	8040	8665	9000
	28	8640	8880	9410	9650	10415	8880	9410	9650	10415	10825
	32	10225	10440	11135	11400	12310	10440	11135	11400	12310	12790
	36	11760	12050	13250	13105	14135	12050	13250	13105	14135	14690
	40	13200	13560	14425	14830	15985	13560	14425	14830	15985	16585
	44	14785	15120	16030	16510	17760	15120	16030	16510	17760	18430
	48	16320	16680	17710	17905	19610	16680	17710	17905	19610	20375
	52	17710	18190	19250	19750	21335	18190	19250	19750	21335	22225
	56	19370	19750	21000	21550	23255	19750	21000	21550	23255	24215
	60	20735	21290	22510	23110	24960	21290	22510	23110	24960	26040
	64	22390	22895	24265	24935	26880	22895	24265	24935	26880	28010

* Derating factors for inlet grilles, see Table 7. For **FWG-A** units, use ratings for FS-A units and apply derate correction factors from table 7.

Hot Water Capacities

FRONT OUTLET CABINETS, TYPES (FS-A, SR-A, RF-A) (W-A, PW-A)**
SR-A & RF-A are same capacity as FS-A.

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 160°F 52"	56"	60"	64"
FS-A 18	4	1.1	1.4	1.7	2.0	2.3	2.5	2.8	3.1	3.3	3.6	3.9	4.2
	6	1.7	2.1	2.5	2.9	3.3	3.7	4.2	4.6	5.0	5.4	5.8	6.3
	8	2.0	2.6	3.2	3.9	4.5	5.1	5.7	6.3	6.9	7.5	8.0	8.6
FS-A 20	4	1.3	1.6	1.9	2.3	2.6	3.0	3.3	3.7	4.0	4.3	4.6	5.0
W-A 14	6	1.8	2.3	2.8	3.3	3.8	4.3	4.8	5.3	5.7	6.2	6.7	7.2
	8	2.4	3.0	3.6	4.2	4.8	5.4	6.1	6.7	7.3	7.9	8.7	9.2
FS-A 24	4	1.4	1.8	2.2	2.6	3.0	3.4	3.8	4.2	4.5	4.9	5.3	5.7
W-A 18	6	2.0	2.8	3.3	3.9	4.7	5.0	5.6	6.2	6.7	7.3	7.8	8.4
	8	2.6	3.3	3.9	4.6	5.3	6.0	6.7	7.4	8.0	8.7	9.4	10.2
FS-A 26	4	1.5	1.9	2.2	2.6	3.1	3.4	3.9	4.3	4.6	5.0	5.3	5.7
W-A 20	6	2.2	2.8	3.4	4.0	4.6	5.2	5.8	6.4	6.9	7.5	8.1	8.4
	8	2.7	3.3	4.0	4.8	5.4	6.2	6.9	7.6	8.3	9.0	9.7	10.3
FS-A 32	4	1.6	2.0	2.4	2.9	3.3	3.7	4.2	4.6	5.0	5.4	5.8	6.3
W-A 26	6	2.4	3.1	3.7	4.4	5.1	5.7	6.4	7.0	7.6	8.3	9.4	9.6
	8	2.8	3.6	4.3	5.1	5.9	6.6	7.4	8.2	8.9	9.7	10.4	11.1
W-A 32	4	1.7	2.1	2.5	3.0	3.5	3.9	4.4	4.8	5.3	5.8	6.3	6.7
	6	2.5	3.3	3.9	4.6	5.3	5.9	6.6	7.3	8.0	8.6	9.2	10.1
	8	3.0	3.8	4.6	5.4	6.2	6.9	7.7	8.5	9.3	10.0	10.9	11.8

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 170°F 52"	56"	60"	64"
FS-A 18	4	1.3	1.6	1.9	2.3	2.6	2.9	3.2	3.5	3.8	4.2	4.5	4.8
	6	1.9	2.4	2.8	3.3	3.8	4.3	4.8	5.2	5.7	6.2	6.7	7.2
	8	2.3	3.0	3.7	4.5	5.2	5.8	6.5	7.2	7.8	8.5	9.2	9.9
FS-A 20	4	1.4	1.8	2.2	2.6	3.0	3.4	3.8	4.2	4.6	5.0	5.4	5.8
W-A 14	6	2.2	2.7	3.2	3.8	4.3	4.9	5.5	6.0	6.5	7.1	7.6	8.2
	8	2.7	3.4	4.1	4.8	5.5	6.2	6.9	7.7	8.4	9.1	9.8	10.6
FS-A 24	4	1.7	2.1	2.5	3.0	3.4	3.9	4.3	4.8	5.2	5.6	6.0	6.5
W-A 18	6	2.6	3.2	3.8	4.5	5.1	5.8	6.4	7.1	7.8	8.3	8.9	9.6
	8	2.9	3.7	4.5	5.3	6.1	6.9	7.6	8.4	9.2	10.1	10.8	11.7
FS-A 26	4	1.8	2.2	2.6	3.1	3.5	4.0	4.4	4.9	5.4	5.8	6.3	6.7
W-A 20	6	2.7	3.3	3.9	4.6	5.3	5.9	6.6	7.3	7.9	8.6	9.3	9.9
	8	3.0	3.8	4.6	5.4	6.2	7.0	7.8	8.7	9.5	10.2	11.1	11.9
FS-A 32	4	1.9	2.3	2.8	3.3	3.8	4.3	4.8	5.2	5.7	6.2	6.7	7.2
W-A 26	6	2.9	3.6	4.3	5.1	5.8	6.6	7.3	8.0	8.7	9.5	10.2	11.1
	8	3.3	4.1	5.0	5.9	6.7	7.6	8.5	9.4	10.2	11.2	11.9	12.9
W-A 32	4	2.0	2.4	2.9	3.5	4.0	4.5	5.0	5.6	6.1	6.6	7.1	7.6
	6	3.0	3.7	4.5	5.3	6.0	6.8	7.6	8.3	9.1	10.0	10.6	11.5
	8	3.4	4.3	5.2	6.1	7.0	8.0	8.9	9.8	10.7	11.5	12.5	13.3

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 180°F 52"	56"	60"	64"
FS-A 18	4	1.5	1.8	2.2	2.6	2.9	3.3	3.6	4.0	4.4	4.7	5.0	5.4
	6	2.2	2.7	3.2	3.8	4.3	4.8	5.4	5.9	6.4	7.0	7.6	8.1
	8	2.6	3.4	4.2	5.0	5.8	6.6	7.3	8.1	9.0	9.7	10.4	11.1
FS-A 20	4	1.7	2.1	2.5	3.0	3.4	3.9	4.3	4.7	5.1	5.6	6.1	6.5
W-A 14	6	2.4	3.0	3.6	4.3	4.9	5.5	6.2	6.8	7.4	8.0	8.6	9.3
	8	3.0	3.8	4.6	5.4	6.2	7.0	7.8	8.6	9.3	10.2	10.9	11.7
FS-A 24	4	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.4	5.9	6.4	6.9	7.4
W-A 18	6	2.8	3.6	4.3	5.0	5.8	6.5	7.2	8.0	8.8	9.4	10.2	11.0
	8	3.2	4.2	5.1	6.0	6.9	7.7	8.6	9.5	10.4	11.3	12.1	12.9
FS-A 26	4	2.0	2.4	2.9	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.2	7.5
W-A 20	6	3.0	3.7	4.4	5.2	5.9	6.7	7.5	8.2	8.9	9.7	10.4	11.4
	8	3.4	4.3	5.2	6.1	7.0	8.0	8.9	10.2	10.9	11.6	12.4	13.3
FS-A 32	4	2.1	2.6	3.1	3.7	4.3	4.8	5.4	5.9	6.4	7.0	7.5	8.1
W-A 26	6	3.2	4.1	4.9	5.7	6.6	7.4	8.2	9.1	9.9	10.6	11.4	12.3
	8	3.7	4.7	5.6	6.6	7.6	8.6	9.6	10.5	11.5	12.6	13.6	14.6
W-A 32	4	2.2	2.8	3.3	3.9	4.5	5.1	5.7	6.3	6.9	7.4	8.0	8.6
	6	3.3	4.2	5.0	5.9	6.8	7.7	8.6	9.4	10.2	11.0	12.0	13.0
	8	3.8	4.9	5.9	6.9	8.0	9.0	10.0	11.1	12.1	13.1	14.1	15.0

Hot Water Capacities

FRONT OUTLET CABINETS, TYPES (FS-A, SR-A, RF-A) (W-A, PW-A)**
SR-A & RF-A are same capacity as FS-A.

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 190°F 52"	56"	60"	64"
FS-A 18	4	1.8	2.1	2.5	2.9	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.1
	6	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0
	8	3.0	3.8	4.7	5.6	6.5	7.3	8.2	9.0	9.9	10.9	11.6	12.5
FS-A 20	4	1.9	2.3	2.8	3.3	3.8	4.3	4.8	5.3	5.7	6.2	6.7	7.2
W-A 14	6	2.7	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	9.0	9.7	10.2
	8	3.3	4.2	5.1	6.0	6.9	7.8	8.7	9.6	10.5	11.3	12.3	13.2
FS-A 24	4	2.2	2.7	3.2	3.8	4.3	4.9	5.4	6.0	6.5	7.1	7.6	8.2
W-A 18	6	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.9	9.8	10.4	11.3	12.0
	8	3.7	4.7	5.6	6.6	7.6	8.6	9.6	10.6	11.6	12.6	13.5	14.6
FS-A 26	4	2.3	2.7	3.3	3.9	4.4	5.0	5.6	6.1	6.7	7.3	7.9	8.4
W-A 20	6	3.3	4.1	4.9	5.8	6.6	7.5	8.3	9.2	10.0	10.9	11.6	12.6
	8	3.8	4.8	5.8	6.8	7.8	8.8	9.9	11.0	11.9	13.0	13.9	15.0
FS-A 32	4	2.4	2.9	3.5	4.1	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0
W-A 26	6	3.6	4.5	5.4	6.4	7.3	8.2	9.2	10.0	11.0	11.8	12.8	13.7
	8	4.1	5.2	6.3	7.4	8.5	9.6	10.7	11.9	12.9	14.1	15.0	16.0
W-A 32	4	2.5	3.1	3.7	4.4	5.0	5.7	6.3	7.0	7.6	8.3	8.9	9.6
	6	3.7	4.7	5.6	6.6	7.6	8.5	9.5	10.6	11.4	12.5	13.4	14.5
	8	4.3	5.4	6.5	7.7	8.8	9.9	11.0	12.1	13.3	14.7	15.6	16.7

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 200°F 52"	56"	60"	64"
FS-A 18	4	1.9	2.3	2.7	3.1	3.6	4.0	4.4	4.9	5.3	5.8	6.3	6.8
	6	2.6	3.3	3.9	4.6	5.3	5.9	6.6	7.3	7.9	8.6	9.2	9.9
	8	3.3	4.2	5.2	6.2	7.1	8.0	9.0	9.9	10.9	12.0	12.8	13.6
FS-A 20	4	2.0	2.6	3.1	3.6	4.2	4.7	5.3	5.8	6.3	6.9	7.4	8.0
W-A 14	6	3.0	3.7	4.5	5.3	6.0	6.8	7.6	8.3	9.0	9.9	10.6	11.5
	8	3.6	4.7	5.6	6.6	7.6	8.6	9.6	10.5	11.6	12.7	13.6	14.6
FS-A 24	4	2.3	2.9	3.5	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0
W-A 18	6	3.5	4.4	5.3	6.2	7.1	8.0	8.9	9.8	10.9	11.4	12.4	13.2
	8	4.3	5.2	6.2	7.3	8.2	9.5	10.5	11.6	12.7	13.9	14.9	16.1
FS-A 26	4	2.4	3.0	3.6	4.3	4.9	5.5	6.1	6.7	7.3	8.0	8.6	9.2
W-A 20	6	3.6	4.5	5.4	6.4	7.3	8.2	9.2	10.2	10.7	12.0	12.6	13.9
	8	4.4	5.3	6.4	7.5	8.6	9.8	10.8	11.9	13.1	14.3	15.3	16.5
FS-A 32	4	2.6	3.2	3.9	4.6	5.2	5.9	6.6	7.3	7.9	8.6	9.2	9.9
W-A 26	6	4.0	5.0	6.0	7.0	8.0	9.1	10.0	11.0	12.1	13.2	14.1	15.1
	8	4.5	5.7	6.9	8.1	9.3	10.5	11.8	13.1	14.2	15.3	16.5	17.6
W-A 32	4	2.9	3.4	4.1	4.8	5.3	6.2	7.0	7.7	8.4	9.1	9.8	10.5
	6	4.2	5.2	6.2	7.3	8.3	9.4	10.6	11.4	12.6	13.8	14.7	15.7
	8	4.7	6.0	7.2	8.5	9.8	11.1	12.2	13.6	14.7	16.1	17.2	18.6

MODEL	DEPTH SYMBOL	FRONT OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 210°F 52"	56"	60"	64"
FS-A 18	4	2.0	2.5	2.9	3.4	3.9	4.4	4.9	5.3	5.8	6.3	6.8	7.3
	6	2.9	3.6	4.3	5.0	5.7	6.5	7.2	7.9	8.6	9.4	10.1	10.8
	8	3.5	4.6	5.6	6.7	7.8	8.8	9.9	11.0	12.0	13.1	14.0	14.9
FS-A 20	4	2.2	2.8	3.4	4.0	4.6	5.2	5.8	6.3	6.9	7.5	8.1	8.7
W-A 14	6	3.2	4.0	4.9	5.8	6.6	7.4	8.3	9.1	9.9	10.7	11.6	12.5
	8	4.0	5.1	6.1	7.2	8.3	9.4	10.5	11.7	12.6	13.6	14.7	15.9
FS-A 24	4	2.5	3.2	3.8	4.5	5.2	5.9	6.5	7.2	7.8	8.5	9.1	10.0
W-A 18	6	3.8	4.8	5.7	6.7	7.7	8.7	9.7	10.6	11.6	12.5	13.6	14.5
	8	4.4	5.6	6.8	8.0	9.2	10.5	11.5	12.6	13.9	15.2	16.3	17.6
FS-A 26	4	2.6	3.3	3.9	4.6	5.3	6.0	6.7	7.4	8.0	8.7	9.3	10.0
W-A 20	6	3.8	4.9	5.9	6.9	8.0	9.0	10.1	10.9	12.0	13.1	14.0	15.2
	8	4.6	5.8	7.0	8.2	9.4	10.6	12.0	13.2	14.3	15.4	16.7	18.1
FS-A 32	4	2.8	3.5	4.2	5.0	5.7	6.5	7.2	7.9	8.7	9.4	10.1	10.8
W-A 26	6	4.3	5.4	6.5	7.7	8.8	9.9	10.9	12.2	13.2	14.3	15.5	16.7
	8	5.1	6.3	7.6	8.9	10.1	11.6	12.9	14.2	15.4	16.7	18.1	19.5
W-A 32	4	3.0	3.7	4.5	5.3	6.0	6.8	7.6	8.4	9.1	9.9	10.7	11.4
	6	4.5	5.6	6.8	8.0	9.1	10.2	11.4	12.5	13.7	15.0	16.1	17.2
	8	5.3	6.6	7.9	9.3	10.7	12.1	13.5	14.6	16.1	17.6	18.8	20.3

MBH — Thousands BTU/HR.

**** Derating factors for inlet grilles, see Page 12 Table 7.**

Hot Water Capacities

SLOPING TOP CABINETS TYPES SW-A & SF-A **

MODEL	SLOPING OUTLET TYPES – 65°F ENTERING AIR									AVERAGE WATER TEMP. 160°F			
	DEPTH SYMBOL	LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	52"	56"	60"	64"
SF-A 18	4	1.4	1.8	2.2	2.6	3.0	3.4	3.8	4.1	4.5	4.9	5.2	5.6
	6	2.2	2.8	3.3	3.9	4.5	5.1	5.7	6.3	6.9	7.6	8.1	8.6
	8	2.9	3.7	4.4	5.2	6.0	6.7	7.5	8.3	9.1	10.0	10.6	11.5
SF-A 20	4	1.5	1.9	2.3	2.7	3.1	3.5	3.9	4.3	4.7	5.1	5.5	5.9
	6	2.3	2.9	3.5	4.1	4.7	5.4	6.0	6.6	7.2	7.8	8.4	9.0
SW-A 14	8	3.0	3.8	4.6	5.4	6.2	6.9	7.7	8.5	9.3	10.2	10.9	11.8
SF-A 24	4	1.6	2.0	2.4	2.9	3.3	3.7	4.2	4.6	5.0	5.4	5.8	6.3
	6	2.5	3.2	3.8	4.5	5.2	5.9	6.5	7.2	7.8	8.5	9.1	9.8
SW-A 18	8	3.2	4.0	4.8	5.7	6.5	7.4	8.2	9.0	9.8	10.6	11.5	12.5
SF-A 26	4	1.7	2.1	2.5	2.9	3.4	3.8	4.2	4.7	5.1	5.5	5.9	6.4
	6	2.6	3.3	3.9	4.6	5.3	6.0	6.7	7.4	8.0	8.7	9.4	10.0
SW-A 20	8	3.2	4.1	4.9	5.8	6.7	7.6	8.4	9.3	10.1	10.9	11.8	12.6
SF-A 32	4	1.8	2.2	2.6	3.1	3.5	4.0	4.4	4.9	5.3	5.8	6.2	6.7
	6	2.8	3.5	4.2	5.0	5.7	6.5	7.2	7.9	8.6	9.4	9.7	10.0
SW-A 26	8	3.5	4.4	5.3	6.3	7.2	8.1	9.1	9.9	10.9	11.9	12.7	13.6
SW-A 32	4	1.9	2.3	2.7	3.2	3.7	4.2	4.6	5.1	5.5	6.0	6.5	7.1
	6	2.9	3.7	4.4	5.2	6.0	6.7	7.5	8.3	9.0	9.8	10.5	11.4
	8	3.6	4.6	5.5	6.5	7.5	8.5	9.4	10.3	11.4	12.3	13.3	14.4

MODEL	SLOPING OUTLET TYPES – 65°F ENTERING AIR									AVERAGE WATER TEMP. 170°F			
	DEPTH SYMBOL	LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	52"	56"	60"	64"
SF-A 18	4	1.7	2.1	2.5	3.0	3.4	3.9	4.3	4.8	5.2	5.6	6.0	6.4
	6	2.5	3.2	3.8	4.5	5.2	5.8	6.5	7.2	7.9	8.7	9.2	9.8
	8	3.3	4.2	5.1	6.0	6.9	7.6	8.6	9.5	10.4	11.2	12.2	13.0
SF-A 20	4	1.8	2.2	2.6	3.1	3.5	4.0	4.5	4.9	5.3	5.8	6.2	6.7
	6	2.7	3.4	4.0	4.7	5.4	6.1	6.8	7.5	8.2	8.9	9.6	10.2
SW-A 14	8	3.3	4.3	5.2	6.1	7.1	7.9	8.9	9.8	10.7	11.5	12.5	13.3
SF-A 24	4	1.8	2.3	2.8	3.3	3.8	4.3	4.8	5.2	5.7	6.2	6.7 10.5	7.2
	6	2.4	3.7	4.4	4.7	6.0	6.7	7.5	8.2	8.9	9.7	13.2	11.2
SW-A 18	8	3.4	4.6	5.5	6.4	7.4	8.4	9.4	10.5	11.3	12.2		14.2
SF-A 26	4	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.4	5.8	6.3	6.8	7.3
	6	3.0	3.8	4.5	5.3	6.1	6.9	7.7	8.5	9.2	9.9	10.8	11.5
SW-A 20	8	3.7	4.7	5.7	6.7	7.7	8.7	9.7	10.5	11.6	12.6	13.6	14.5
SF-A 32	4	1.9	2.5	3.0	3.5	4.1	4.6	5.1	5.6	6.1	6.6	7.1	7.7
	6	3.1	4.0	4.8	5.7	6.6	7.4	8.3	9.1	9.9	10.9	11.6	12.3
SW-A 26	8	4.0	5.0	6.1	7.2	8.2	9.3	10.5	11.6	12.5	13.7	14.6	15.6
SW-A 32	4	2.1	2.6	3.1	3.7	4.2	4.8	5.3	5.8	6.3	6.9	7.5	8.1
	6	3.4	4.2	5.1	6.0	6.8	7.7	8.6	9.5	10.3	11.1	12.1	12.9
	8	4.2	5.3	6.4	7.5	8.6	9.7	10.7	12.0	13.0	14.3	15.3	16.5

MODEL	SLOPING OUTLET TYPES – 65°F ENTERING AIR									AVERAGE WATER TEMP. 180°F			
	DEPTH SYMBOL	LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	52"	56"	60"	64"
SF-A 18	4	1.9	2.4	2.9	3.4	3.9	4.4	4.8	5.4	5.8	6.3	6.8	7.3
	6	2.8	3.6	4.3	5.1	5.9	6.6	7.3	8.1	8.9	9.8	10.4	11.0
	8	3.7	4.7	5.7	6.7	7.7	8.7	9.7	10.8	11.7	12.6	13.7	14.9
SF-A 20	4	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.6	7.1	7.6
	6	3.0	3.8	4.5	5.3	6.1	6.9	7.7	8.5	9.3	10.0	10.8	11.7
SW-A 14	8	3.7	4.8	5.8	6.9	8.0	9.0	9.9	10.9	12.0	13.2	14.1	15.0
SF-A 24	4	2.0	2.6	3.1	3.7	4.3	4.8	5.4	5.9	6.4	7.0	7.5	8.1
	6	3.3	4.1	5.0	5.9	6.7	7.6	8.4	9.3	10.1	10.9	11.8	12.6
SW-A 18	8	4.1	5.2	6.2	7.3	8.4	9.5	10.5	11.8	12.7	13.7	14.9	16.1
SF-A 26	4	2.1	2.7	3.2	3.8	4.4	4.9	5.5	6.0	6.5	7.1	7.7	8.3
	6	3.4	4.3	5.1	6.0	6.9	7.8	8.7	9.5	10.4	11.2	12.1	12.9
SW-A 20	8	4.2	5.3	6.4	7.5	8.6	9.8	11.0	12.1	13.1	14.3	15.3	16.3
SF-A 32	4	2.2	2.8	3.4	4.0	4.6	5.1	5.7	6.3	6.9	7.5	8.1	8.7
	6	3.5	4.6	5.5	6.5	7.4	8.4	9.3	10.4	11.2	12.2	13.0	13.9
SW-A 26	8	4.5	5.7	6.9	8.1	9.3	10.5	11.9	13.0	14.1	15.4	16.5	17.8
SW-A 32	4	2.3	2.9	3.5	4.1	4.8	5.4	6.0	6.6	7.2	7.8	8.5	9.2
	6	3.8	4.8	5.7	6.7	7.7	8.7	9.7	10.8	11.7	12.8	13.6	14.5
	8	4.6	5.9	7.1	8.4	9.7	11.1	12.1	13.4	14.7	15.9	17.2	18.6

MBH — Thousands BTU/HR.

**** Derating factors for inlet grilles, see Page 12 Table 7.**

Hot Water Capacities

SLOPING TOP CABINETS TYPES SW-A & SF-A**

MODEL	DEPTH SYMBOL	SLOPING OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 190°F 52"	56"	60"	64"
SF-A 18	4	2.1	2.6	3.2	3.8	4.3	4.9	5.4	6.0	6.5	7.1	7.6	8.1
	6	3.2	4.0	4.8	5.7	6.5	7.6	8.2	9.0	10.0	10.9	11.6	12.3
	8	4.4	5.3	6.4	7.5	8.6	9.6	10.7	11.9	13.1	14.3	15.3	16.4
SF-A 20	4	2.1	2.7	3.3	3.9	4.5	5.0	5.6	6.2	6.7	7.3	7.9	8.5
	6	3.3	4.2	5.0	5.9	6.8	7.7	8.6	9.5	10.3	11.3	12.0	12.9
SW-A 14	8	4.4	5.4	6.5	7.7	8.8	10.1	11.0	12.2	13.4	14.5	15.7	16.8
SF-A 24	4	2.1	2.9	3.5	4.1	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0
	6	3.6	4.6	5.5	6.5	7.5	8.4	9.4	10.4	11.2	12.3	13.1	14.1
SW-A 18	8	4.5	5.7	6.9	8.1	9.3	10.5	11.9	12.9	14.2	15.5	16.6	17.8
SF-A 26	4	2.4	3.0	3.6	4.2	4.8	5.5	6.1	6.7	7.3	7.9	8.5	9.2
	6	3.7	4.7	5.7	6.7	7.7	8.7	9.6	10.5	11.6	12.7	13.5	14.5
SW-A 20	8	4.7	5.9	7.1	8.4	9.6	10.8	12.2	13.4	14.5	15.9	17.0	18.3
SF-A 32	4	2.4	3.1	3.7	4.4	5.1	5.9	6.4	7.0	7.7	8.4	9.0	9.6
	6	4.1	5.1	6.1	7.2	8.2	9.3	10.5	11.3	12.4	13.6	14.5	15.6
SW-A 26	8	5.0	6.3	7.6	9.0	10.3	11.8	13.1	14.5	15.7	17.0	18.4	19.7
SW-A 32	4	2.5	3.2	3.9	4.6	5.3	6.0	6.7	7.3	8.0	8.7	9.4	10.2
	6	4.2	5.3	6.4	7.5	8.6	9.7	10.9	12.0	13.0	14.0	15.2	16.3
	8	5.1	6.6	8.0	9.4	10.9	12.3	13.7	14.9	16.4	17.9	19.2	20.6

MODEL	DEPTH SYMBOL	SLOPING OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 200°F 52"	56"	60"	64"
SF-A 18	4	2.2	2.9	3.5	4.1	4.8	5.4	5.9	6.6	7.2	7.8	8.3	8.9
	6	3.5	4.4	5.3	6.3	7.2	8.8	9.0	9.9	11.0	12.0	12.8	13.5
	8	4.5	5.8	7.0	8.2	9.5	10.7	12.0	13.3	14.4	15.5	16.8	18.0
SF-A 20	4	2.4	3.0	3.6	4.3	4.9	5.5	6.2	6.8	7.4	8.1	8.7	9.3
	6	3.7	4.6	5.6	6.6	7.5	8.5	9.5	10.5	11.3	12.4	13.2	14.1
SW-A 14	8	4.6	5.9	7.2	8.5	9.8	10.9	12.4	13.4	14.7	15.9	17.3	18.7
SF-A 24	4	2.6	3.2	3.9	4.6	5.2	5.9	6.6	7.3	7.9	8.6	9.2	10.0
	6	4.1	5.1	6.1	7.2	8.2	9.3	10.4	11.5	12.4	13.4	14.5	15.7
SW-A 18	8	5.1	6.3	7.6	9.0	10.2	11.6	12.9	14.4	15.8	17.4	18.4	19.7
SF-A 26	4	2.8	3.3	4.0	4.7	5.3	6.0	6.7	7.4	8.1	8.8	9.4	10.0
	6	4.1	5.2	6.3	7.4	8.5	9.5	10.5	11.8	12.8	14.0	14.9	16.0
SW-A 20	8	5.2	6.5	7.8	9.2	10.5	11.9	13.4	14.8	16.0	17.5	18.8	20.0
SF-A 32	4	2.8	3.4	4.1	4.9	5.6	6.3	7.0	7.8	8.5	9.2	9.9	10.7
	6	4.4	5.6	6.7	7.9	9.1	10.2	11.5	12.7	13.7	15.0	16.0	17.3
SW-A 26	8	5.4	7.0	8.4	9.9	11.5	13.0	14.5	16.0	17.3	18.9	20.3	22.0
SW-A 32	4	2.9	3.6	4.3	5.1	5.9	6.6	7.3	8.1	8.8	9.6	10.4	11.3
	6	4.7	5.9	7.1	8.3	9.5	10.8	12.0	13.0	14.3	15.4	16.7	18.0
	8	5.7	7.3	8.8	10.4	12.0	13.5	15.0	16.6	18.0	19.7	21.1	22.8

MODEL	DEPTH SYMBOL	SLOPING OUTLET TYPES – 65°F ENTERING AIR LENGTH 20"	24"	28"	32"	36"	40"	44"	48"	AVERAGE WATER TEMP. 210°F 52"	56"	60"	64"
SF-A 18	4	2.5	3.2	3.8	4.5	5.2	5.9	6.5	7.2	7.8	8.5	9.1	9.7
	6	3.8	4.8	5.8	6.8	7.8	8.8	9.8	11.0	12.0	13.3	14.0	14.9
	8	4.9	6.3	7.6	9.0	10.5	11.6	12.9	14.5	15.7	17.0	18.4	19.9
SF-A 20	4	2.6	3.3	4.0	4.7	5.4	6.0	6.8	7.4	8.1	8.8	9.5	10.2
	6	4.1	5.1	6.1	7.2	8.2	9.3	10.4	11.3	12.4	13.4	14.5	15.5
SW-A 14	8	5.0	6.5	7.9	9.3	10.8	11.9	13.3	14.9	16.2	17.7	18.9	20.2
SF-A 24	4	2.8	3.5	4.2	5.0	5.7	6.5	7.2	7.9	8.6	9.4	10.1	11.0
	6	4.4	5.5	6.7	7.9	9.0	10.2	11.4	12.3	13.5	14.6	15.8	16.9
SW-A 18	8	5.5	6.9	8.3	9.8	11.2	12.9	14.3	15.5	17.0	18.6	19.9	21.3
SF-A 26	4	2.9	3.6	4.3	5.1	5.8	6.6	7.3	8.1	8.8	9.6	10.3	11.0
	6	4.5	5.7	6.9	8.1	9.3	10.5	11.5	12.9	13.9	15.0	16.3	17.6
SW-A 20	8	5.6	7.1	8.5	10.1	11.7	13.2	14.7	15.9	17.5	18.9	20.5	21.8
SF-A 32	4	2.9	3.7	4.5	5.3	6.1	6.9	7.7	8.5	9.2	9.9	10.8	11.5
	6	4.8	6.1	7.4	8.7	10.0	11.1	12.6	13.8	15.0	16.4	17.5	18.9
SW-A 26	8	6.0	7.6	9.2	10.8	12.4	14.0	15.8	17.2	18.9	20.7	22.1	23.5
SW-A 32	4	3.0	3.9	4.7	5.5	6.4	7.2	8.0	8.8	9.6	10.4	11.4	12.3
	6	5.0	6.4	7.7	9.0	10.4	11.8	12.9	14.4	15.6	16.9	18.3	19.7
	8	6.7	7.9	9.6	11.2	12.9	14.8	16.2	17.9	19.7	21.2	23.0	24.5

MBH — Thousands BTU/HR.

**** Derating factors for inlet grilles, see Page 12 Table 7.**

Miscellaneous Capacity and Selection Data

Selection

1. Determine the conditions of the system. (If hot water, the average temperature, temp. drop, etc.)
2. Determine the MBH capacity of the unit as required for each location as shown on plans or based on heat loss calculations.
3. Refer to the hot water capacity tables on page 8 thru 11 which list capacities at the conditions for the job, for the model convector required.
4. Locate in table the required capacity and read convector size from columns showing Depth, Length, Height.
5. To calculate ratings for temperatures not listed, use correction factors from Table 3 for desired AWT and multiply by 215°F rating.

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
BTU PER SQ. FT.	269	301	327	351	374	463
*Apply factor to Tables 1, 1A, 2 and 2A (pages 6 & 7) to obtain rating at other than 1 psi gauge.						

Note: Max Recommended operating pressure 150 PSIG, (365.9°F). For conversion from steam to hot water, use table factors as multiplier rather than a divisor.

Table 3

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

Table 5

DERATING PERCENTAGE REDUCTION TABLE								
Length	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 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

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%
Refer: All Tables Pages 6-11			

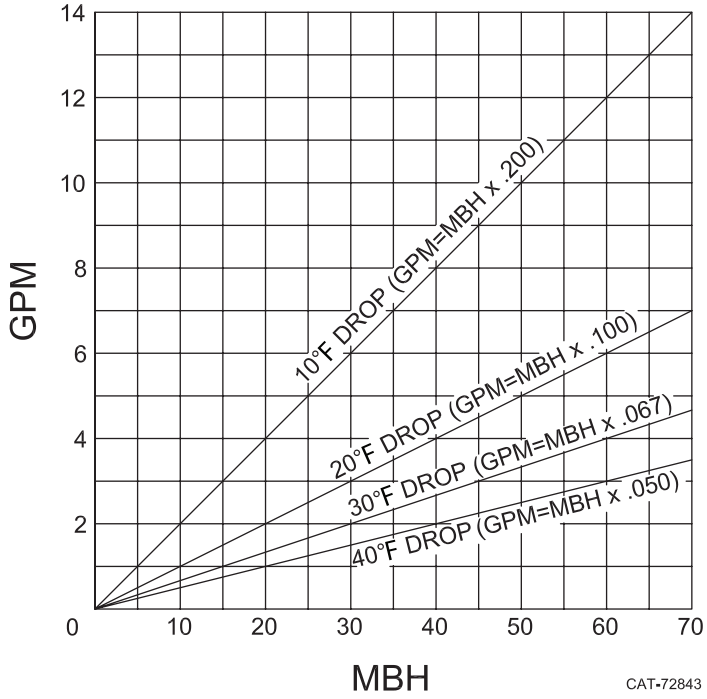
Due to the restriction to air flow, the percentages should be subtracted from the BTU output when inlet grilles are specified.

REFER TO PAGE 21 FOR ELEMENT & PIPING INFORMATION

Miscellaneous Capacity and Selection Data

GALLONS PER MINUTE OF HOT WATER REQUIRED

Table 8



The chart above may be used to determine the approximate GPM required for the desired MBH with various water temperature drops.

Formulas shown in chart with temperature drops may also be used for determining GPM.

EXAMPLE:

MBH	15
Temperature drop	10°F
Factor from formula	.200

15 x .200 = 3.0 GPM

Where systems are designed for low flow rates (velocity) it has been determined by ASHRAE and the Hydronics Institute (I.B.R.) that a minimum flow rate of .25 F.P.S. should be observed. No formal test information is available for performance below the .25 F.P.S. at this point in time.

REF:

BTU = GPM x 500 x TD

GPM = (BTU ÷ 500) ÷ TD

TD = (BTU ÷ 500) ÷ GPM

CORRECTIONS WHEN USING GLYCOL SOLUTION IN SYSTEM

			Propylene Glycol
1. Heat transfer		20% solution	.982*
@ 180°F, with		30% solution	.961*
no increase in		40% solution	.934*
flow rate		50% solution	.902*
2. GPM req'd @ 180°F,		20° Δt	110%*
(no correction to pump curve)			
3. Pump head req'd @ 180°F,			123%*
with increase in GPM			
4. Freezing Point	50% by volume	–37°F	–28°F
	40%	–14°F	–13°F
	30%	+ 2°F	+ 4°F
	20%	+15°F	+17°F

*Compared To Water.

OUTPUT-FLOW RATE CORRECTIONS

Table 9

		Minimum Flow Rate (0.25 Ft./Sec.)	MBH Based on TD & Minimum 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. If the MBH output rating capacities shown on pages 6 to 11 fall below those shown in Table 9 for minimum flow rates, this indicates that the GPM required at a 20°F Water Temperature drop is less than the minimum GPM required to maintain turbulent flow.

Example: From page 8, 20°F water temperature drop
170°F AWT, 65°F EAT
Unit FSA-18, 8"deep, 20" long
MBH = 2.3

This capacity rating is less than the MBH (3.000) shown in Table 9 for a 20°F TD and the minimum flow rate of .30 GPM. Applying the following formula to the example above, we may determine the GPM required for a 20°F TD at 2.3 MBH.

$$GPM = \frac{2300\ BTU}{500 \times 20TD} \qquad GPM = .23$$

Again, this GPM is too low to maintain turbulent flow within the element tubes. Therefore, use Min. GPM of .30 per Table 9. The water temperature drop which may be expected when using the Min. GPM can be determined used the following formula:

$$TD = \frac{2300\ BTU}{500 \times .30} \qquad TD = 15.3°F$$

Note: By using the higher flow rate, a lower water temperature drop will be experienced. Because of this, the average water temperature will be higher and result in a somewhat higher output capacity. For many installations, the use of the minimum GPM from Table 9 will be satisfactory, without further consideration. However, if required, a closer approximation may be obtained by dividing by two and subtracting the result from the entering water temperature of 180°F.

$$\text{i.e. } 180 - \frac{15.3}{2} = 172.4°F\ AWT$$

Then, the new MBH rating may be determined by interpolation between the ratings shown on page 8 for the unit at 170°F AWT and 180°F AWT. In the above example, the new rating would be 2372 BTU which would be very close to the actual performance without resorting to futher iterations.

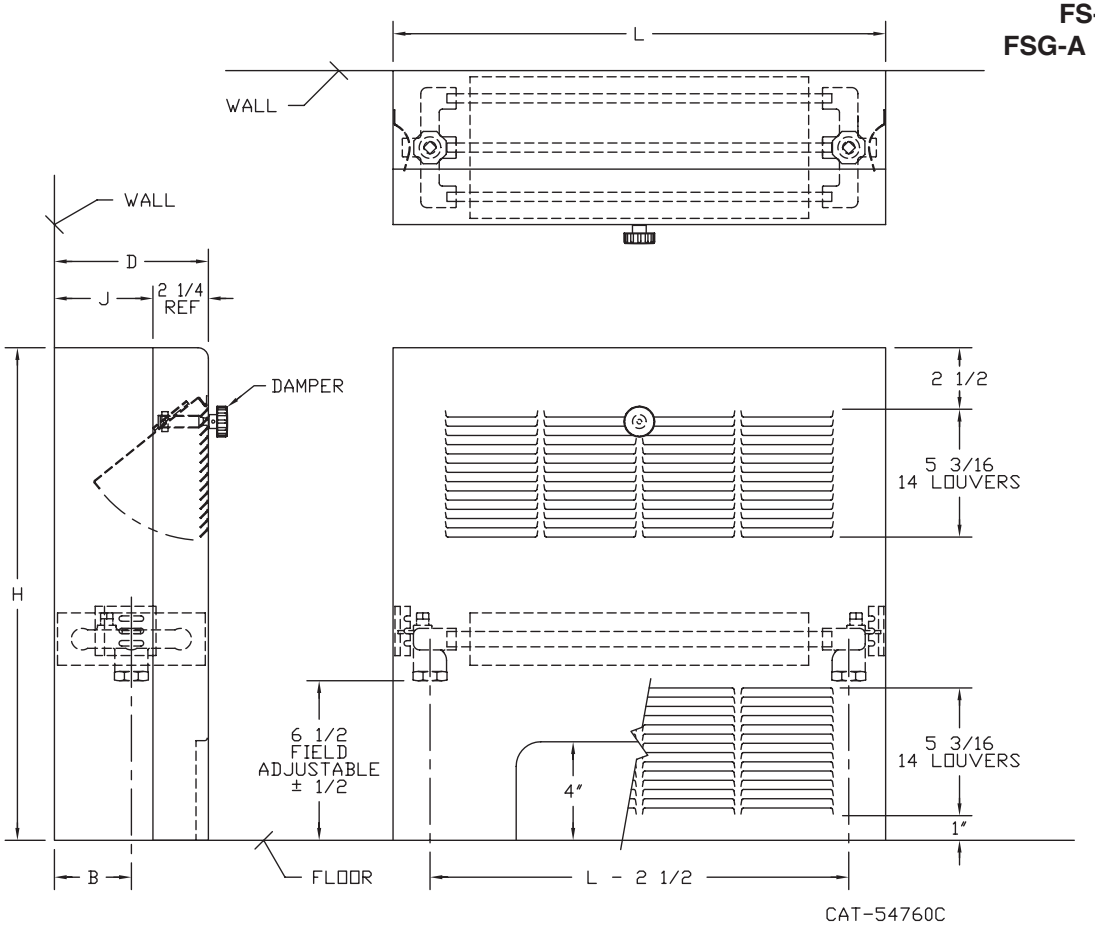
Convector Design/Installation Data

TYPE FS-A / FSG-A

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

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

FS-A = ARCHED INLET
FSG-A = LOUVERED INLET (Grille)

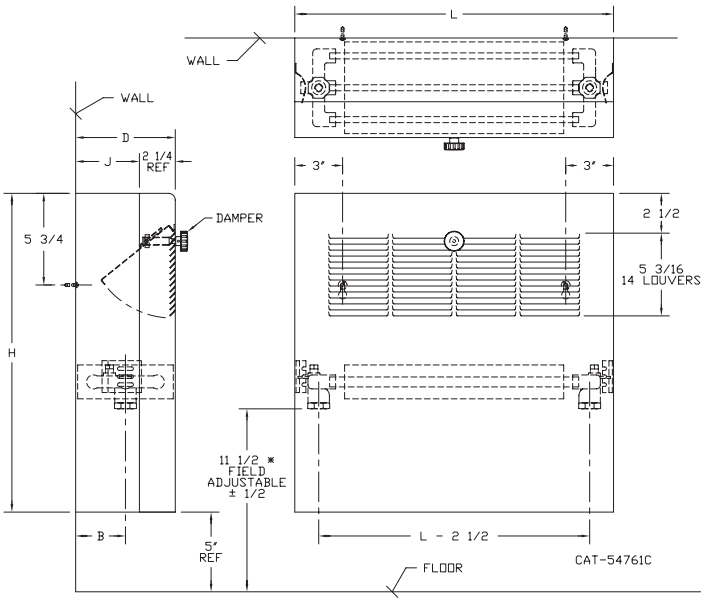


Convector Design/Installation Data

TYPE W-A

W-A

MODEL	D	L	H	B	J
4xx-14 4xx-18 4xx-20 4xx-26 4xx-32	4-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	2-1/8	2
6xx-14 6xx-18 6xx-20 6xx-26 6xx-32	6-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	3-1/8	4
8xx-14 8xx-18 8xx-20 8xx-26 8xx-32	8-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	4-1/8	6



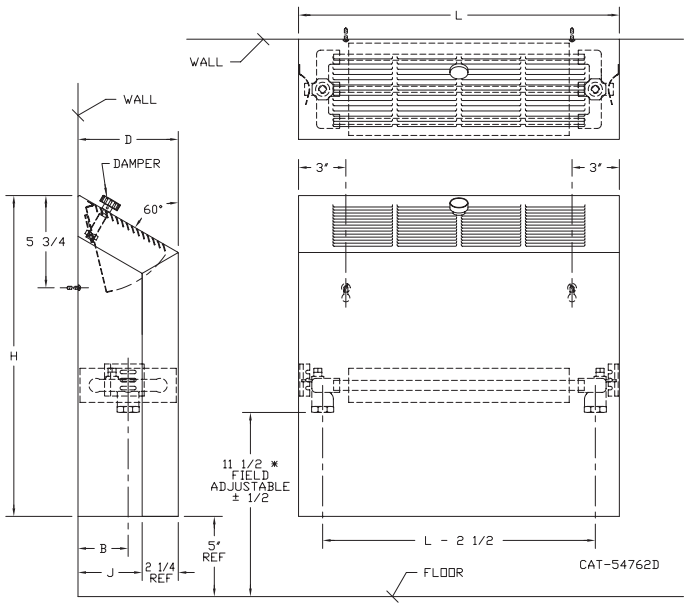
* 7-1/2" For 14" High Units

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

TYPE SW-A

SW-A

MODEL	D	L	H	B	J
4xx-14 4xx-18 4xx-20 4xx-26 4xx-32	4-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	2-1/8	2
6xx-14 6xx-18 6xx-20 6xx-26 6xx-32	6-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	3-1/8	4
8xx-14 8xx-18 8xx-20 8xx-26 8xx-32	8-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	14 18 20 26 32	4-1/8	6



* 7-1/2" For 14" High Units

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

Convector Design/Installation Data

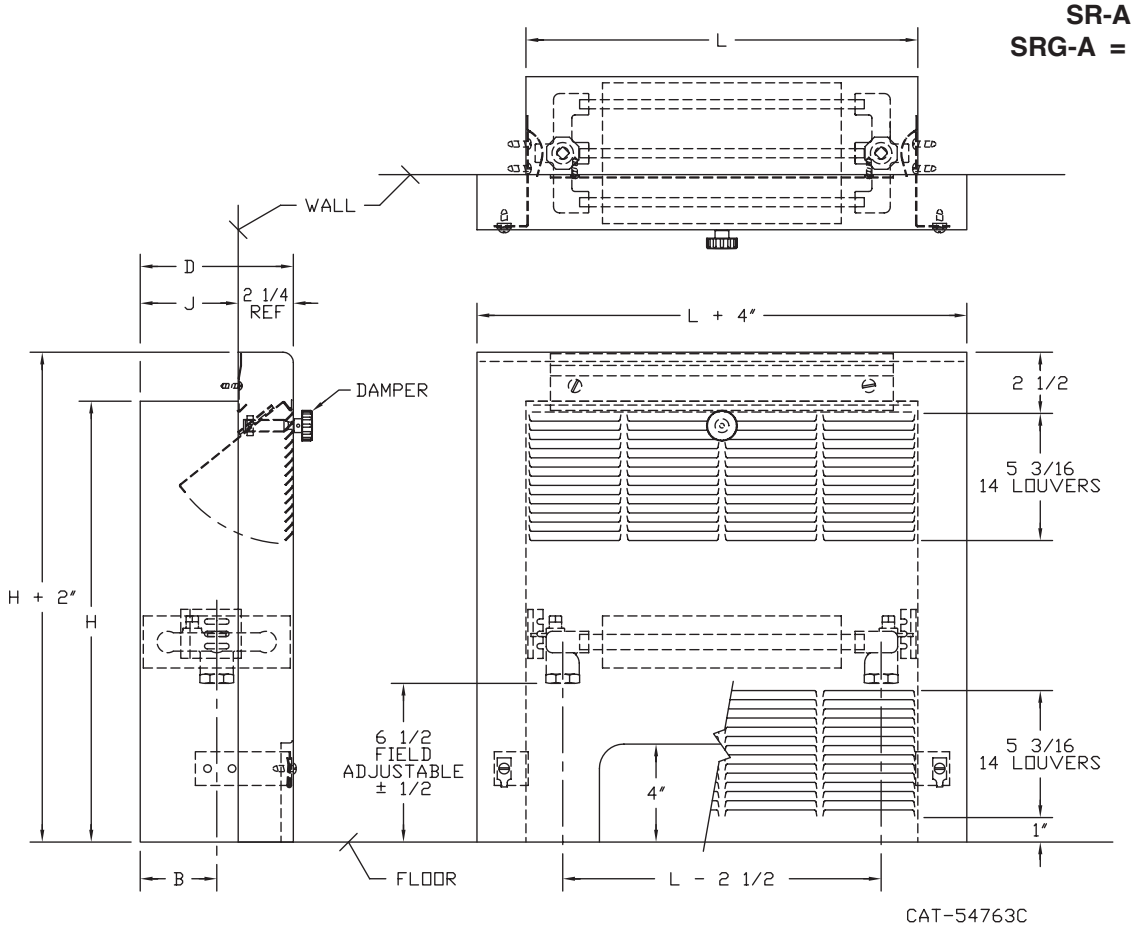
TYPE SR-A / SRG-A

MODEL	D	L	H	B	J
4xx-16 4xx-18 4xx-22 4xx-24 4xx-30	4-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	16 18 22 24 30	2-1/8	2
6xx-16 6xx-18 6xx-22 6xx-24 6xx-30	6-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	16 18 22 24 30	3-1/8	4
8xx-16 8xx-18 8xx-22 8xx-24 8xx-30	8-1/4	20,24,28, 32,36,40, 44,48,52, 56,60,64,	16 18 22 24 30	4-1/8	6

NOTE: Order by Liner Dimensions — L x H.
When adding end pockets, liner and front length increase.

Ratings, pages 6, 8 and 9, equivalent to FS-A Models. (SR-A 416 = FS-A 418)

SR-A = ARCHED INLET
SRG-A = LOUVERED INLET (Grille)



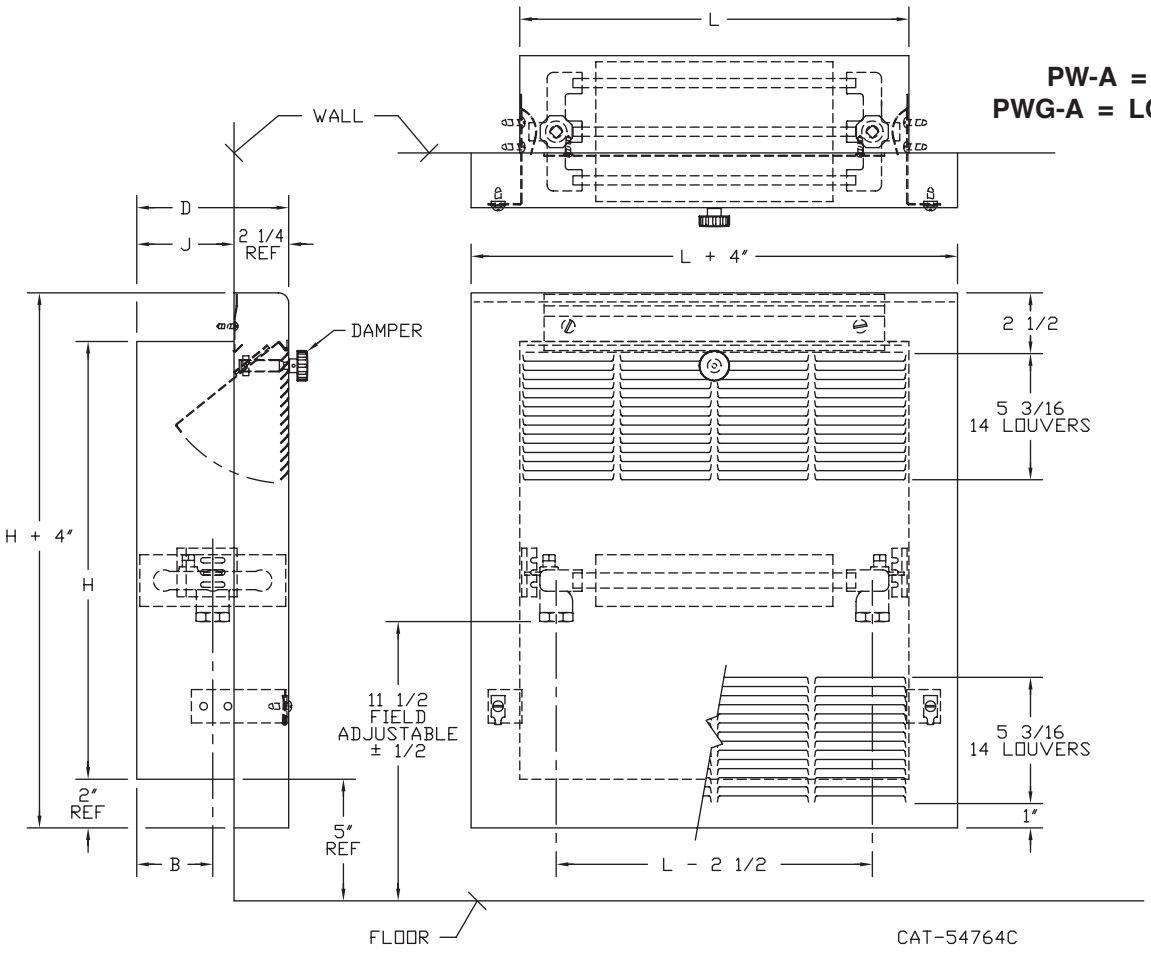
Convector Design/Installation Data

TYPE PW-A / PWG-A

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

NOTE: Order by Liner Dimensions — L x H.
When adding end pockets, liner and front length increase.

PW-A = BOTTOM INLET
PWG-A = LOUVERED INLET (Grille)



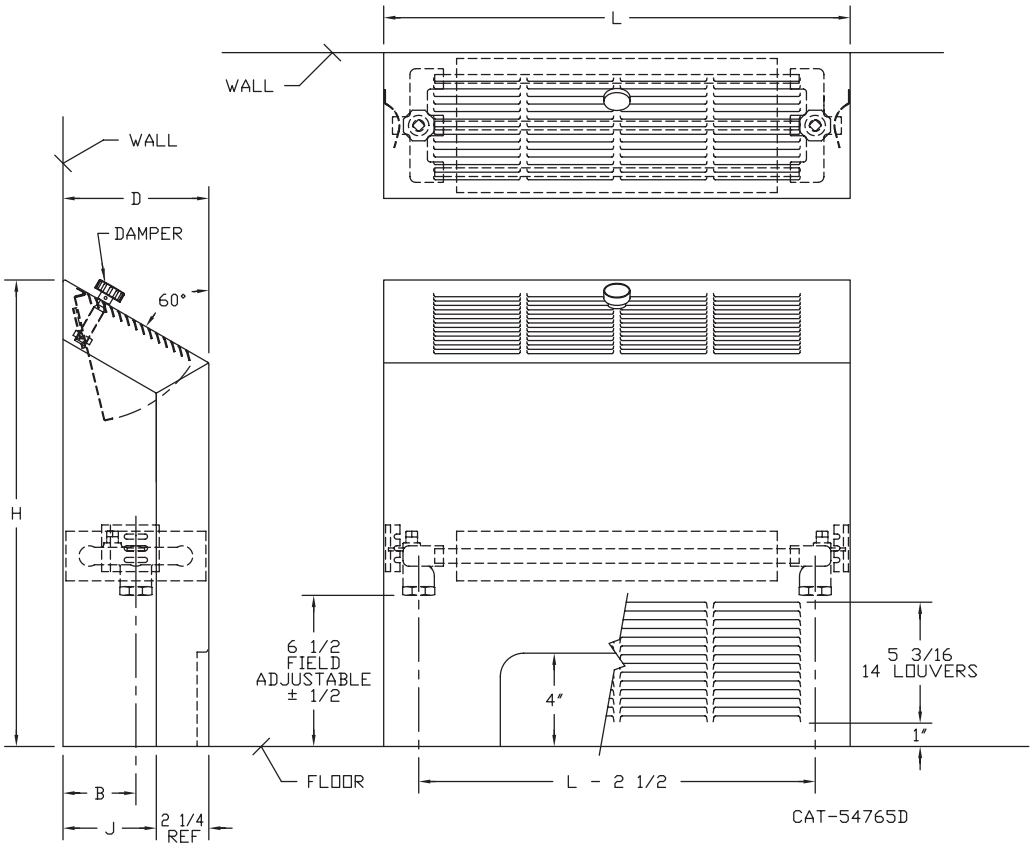
Convector Design/Installation Data

TYPE SF-A / SFG-A

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

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

SF-A = ARCHED INLET
SFG-A = LOUVERED INLET
(Grille)



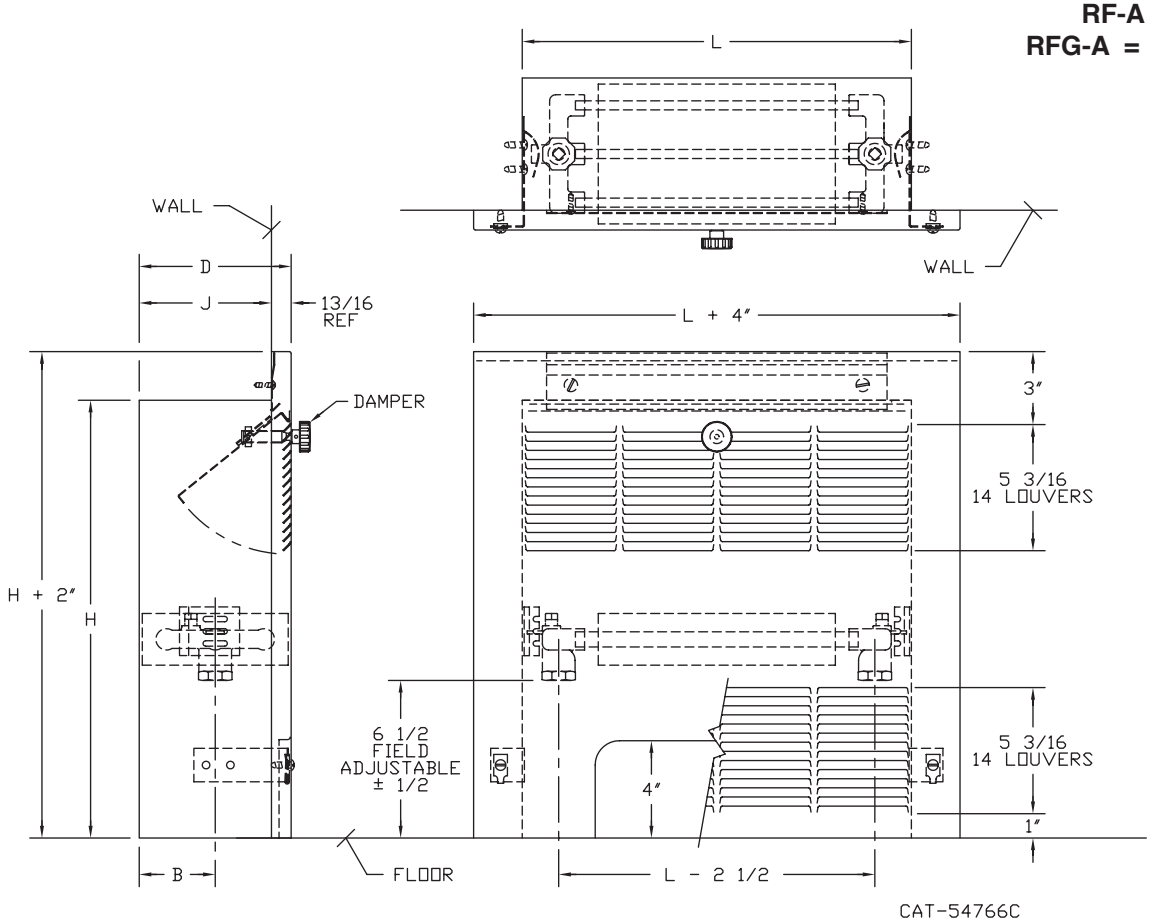
Convector Design/Installation Data

TYPE RF-A / RFG-A

MODEL	D	L	H	B	J
4xx-18 4xx-20 4xx-24 4xx-26 4xx-32	4-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	2-1/8	4
6xx-18 6xx-20 6xx-24 6xx-26 6xx-32	6-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	3-1/8	6
8xx-18 8xx-20 8xx-24 8xx-26 8xx-32	8-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	4-1/8	8

NOTE: Order by Liner Dimensions — L x H.
When adding end pockets, liner and front length increase.

RF-A = ARCHED INLET
RFG-A = LOUVERED INLET
(Grille)



Convector Design/Installation Data

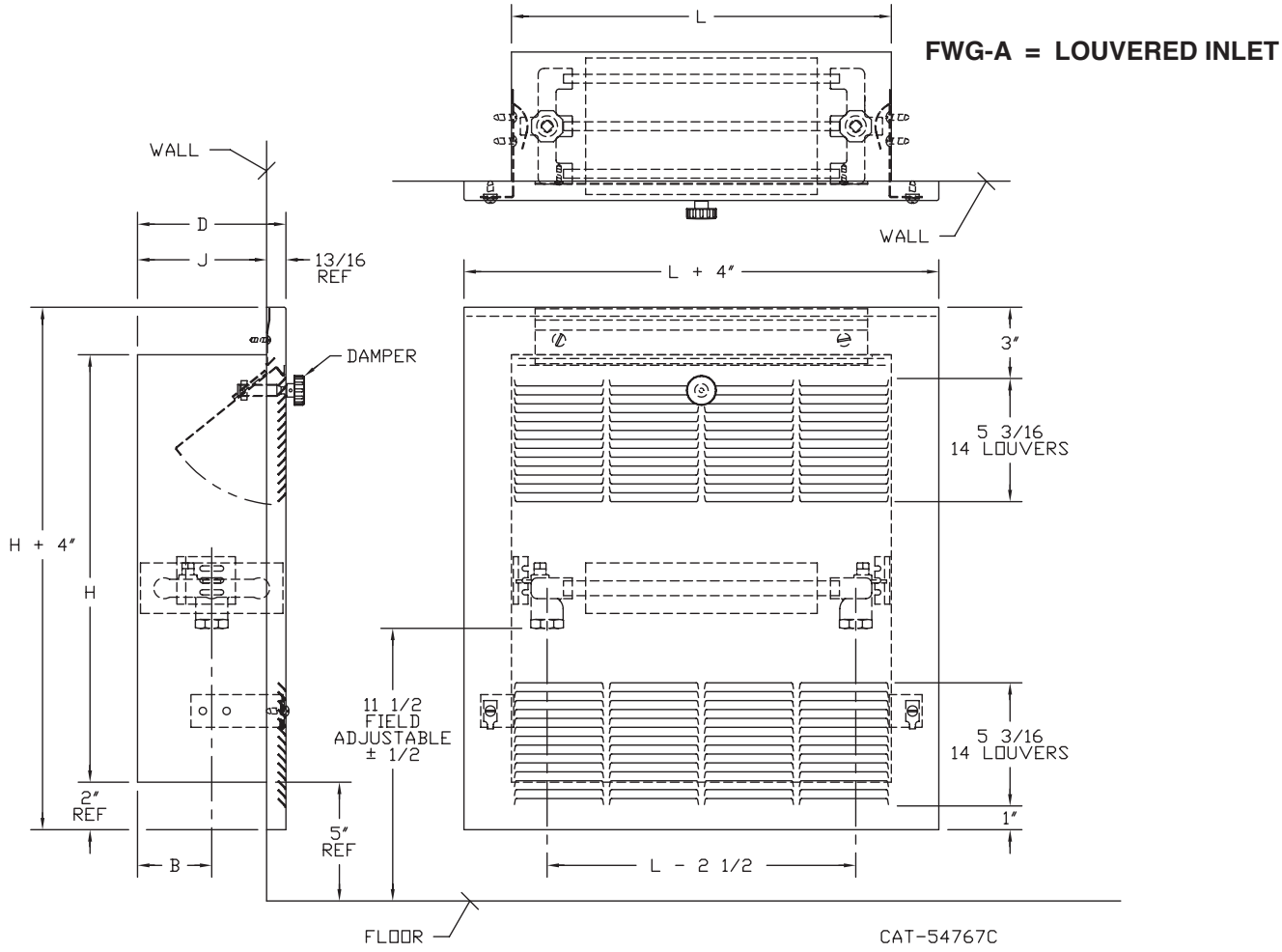
TYPE FWG-A

MODEL	D	L	H	B	J
4xx-18 4xx-20 4xx-24 4xx-26 4xx-32	4-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	2-1/8	4
6xx-18 6xx-20 6xx-24 6xx-26 6xx-32	6-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	3-1/8	6
8xx-18 8xx-20 8xx-24 8xx-26 8xx-32	8-13/16	20,24,28, 32,36,40, 44,48,52, 56,60,64,	18 20 24 26 32	4-1/8	8

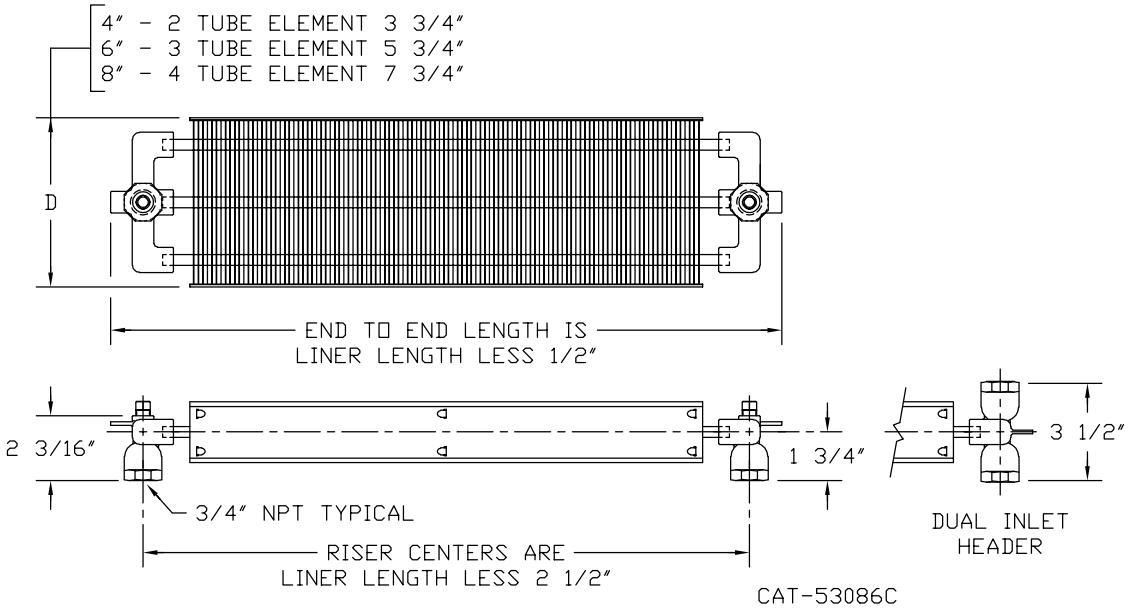
NOTE: Order by Liner Dimensions — L x H.
When adding end pockets, liner and front length increase.

For ratings use those shown on pages 6, 8 & 9. Same as FSA. Then apply correction factors from Table 7, page 12.

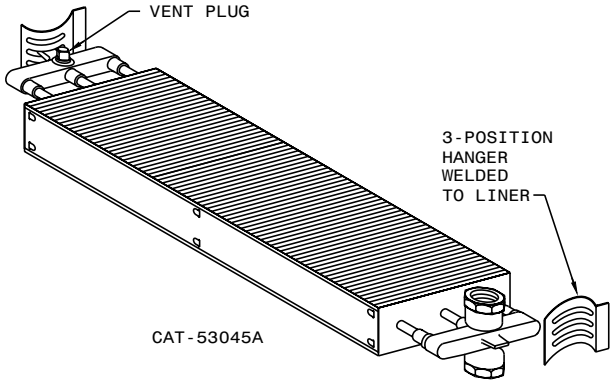
FWG-A = LOUVERED INLET



Convector Design/Installation Data

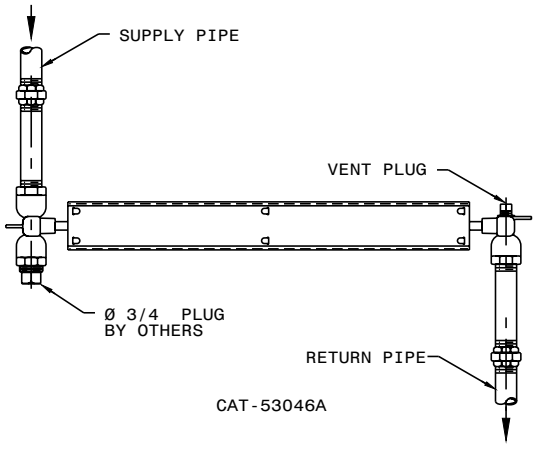


NOTE: When ordering convectors with end pockets, always refer to the standard unit length. The overall physical length will increase by 4" for each end pocket. The coil length will remain the standard size. Coil fins are 2½" high by width shown above and are mechanically bonded to copper tube at 6 fins per inch.



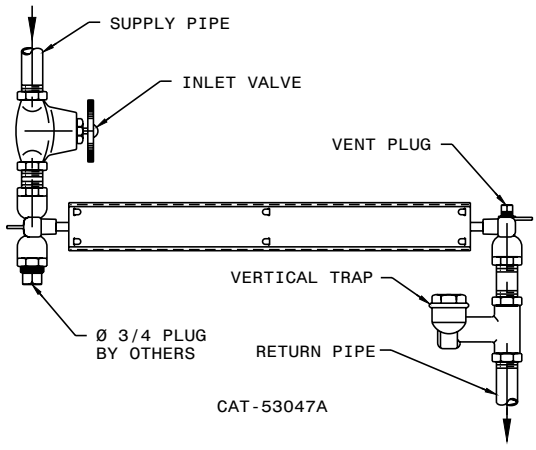
Non-ferrous convector heating elements consist of aluminum fins specially collared and mechanically bonded to 3/8" diameter copper tubes as the primary radiating surface. The tubes are joined at each end by cast brass headers for connection to the system risers. One header is provided with 1/4" NPT tapping for venting, the other header is supplied with a 1/4" NPT galvanized plug. All elements have steel side plates for appearance and strength. Standard heating element is supplied with two single 3/4" NPT headers. An optional dual inlet header is available. This allows for piping to come in from the top or bottom of element. Specify DH header one end when required.

HOT WATER SYSTEM



STEAM SYSTEM

(Not recommended for one pipe steam)



Convector Specifications

CONVECTOR RADIATORS
Furnish and install Convectors where shown on plans.

HEATING ELEMENTS
Convector heating elements shall be non-ferrous consisting of 3/8" diameter copper tubing and .010 thick aluminum plate fins with full-flanged collars. The tubes shall be expanded mechanically into fin collars to form a permanent thermal bond. Fins shall be protected front and back by formed shield plates running entire length of element. Headers shall be cast brass provided with bottom threaded piping connections. Heating elements shall be tested by manufacturer at 100 P.S.I. air pressure under water. Elements shall be supported from brackets on sides of cabinet which shall allow for proper pitching of the element.

CABINETS GENERAL
Cabinets shall be formed from cold rolled steel and shall be suitably braced and reinforced where necessary to provide stiffness, and accurately fitted to prevent air leakage. Cabinet front shall be flanged top and bottom for added rigidity. Top edge of cabinet fronts shall be smoothly formed with 3/8" inside radius. Air outlet louvers (and inlet louvers where required) shall be the venetian type. 18-gauge cold rolled steel heating element support brackets shall be spot welded to inside ends of all Convector cabinets.
After fabrication, all cabinets shall be thoroughly cleaned, and provided with a high quality baked enamel prime coat. Accessory items shall be included as noted per job requirements.

WALL MOUNTED TO FLOOR CABINETS — TYPE FS-A & FSG-A
Type FS-A Convectors shall be constructed from not less than 18-gauge CRS fronts and tops and 20-gauge CRS back, sides. The front shall wrap around the sides of the cabinet and shall fasten at sides with concealed friction-fit fasteners. Air outlet louvers of venetian type shall be in top face of front panel. Air inlet shall be through (arched opening Type FS-A) (venetian type louvers stamped in lower section of front panel — same length and height as air outlet louvers Type FSG-A).

WALL HUNG FLAT-TOP CABINETS — TYPE W-A
Type W-A Convectors shall be constructed from not less than 18-gauge CRS fronts and tops, and 20-gauge CRS back, sides. The front shall wrap around the sides of the cabinet and shall fasten at sides with concealed friction-fit fasteners. Air outlet louvers of venetian type shall be at top of front panel. Air inlet shall be through open bottom. Back panel has stiffener with key-hole for added support and for mounting to wall.

WALL HUNG SLOPE TOP CABINETS — TYPE SW-A
Type SW-A cabinets shall be constructed from not less than 18-gauge CRS front and top and 20-gauge CRS back and sides. The front shall wrap around the sides of the cabinet and shall fasten at sides with concealed friction-fit slip joints. Air outlet louvers of venetian type shall be in slope top. Type SW-A air inlet shall be through open bottom. Back shall be provided with holes for mounting on wall. Back panel has stiffener with key-hole for added support and for mounting to wall.

WALL MOUNTED TO FLOOR SLOPE TOP CABINETS — TYPES SF-A & SFG-A
Type SF-A & SFG-A cabinets shall be constructed from not less than 18-gauge CRS front and top and 20-gauge CRS back and sides. The front shall wrap around the sides of the cabinet and shall fasten at sides with concealed friction-fit fasteners. Air outlet louvers of venetian type shall be in slope top.
Type SF-A air inlet shall be through arched opening in front panel.
Type SFG-A air inlet shall be through venetian type louvers stamped in front panel, same length and height as air outlet louvers.

PARTIALLY RECESSED CABINETS — TYPE SR-A & SRG-A, PW-A & PWG-A
Type SR-A & PW-A Convectors shall be constructed from not less than 18-gauge CRS wrap-around fronts and 20-gauge galvanealed* recessed liner. Depth of cabinet front from wall shall be 2 1/4". Front shall have radiused front edges and shall extend back to wall and fasten to brackets on liner with screws. Front shall be provided with venetian type air outlet grille (and arched air inlet, SR-A) (and integral inlet air grille, SRG-A & PWG-A). Convectors shall be 3 side overlap (for floor mount models, SR-A & SRG-A) and 4 side overlap for wall mounting, model (PWG-A).

FULLY RECESSED CABINETS — TYPE RF-A & RFG-A & FWG-A
Convectors shall be constructed from not less than 18-gauge CRS fronts and not less than 20-gauge galvanealed liner*. Fronts shall engage into horizontal securing strip as well as utilizing two front positive locking screws. Fronts shall be provided with venetian type air outlet louvers and integral inlet air louvers (arched air inlet for RF-A). Metal front cabinets shall be three (3) side overlap for floor mounting RF-A and RFG-A models. Wall mounting model FWG-A shall be four (4) sided front cabinets. All enclosure styles are available as options.

All enclosure styles are available with heavy gauge CRS.
Fronts: 18-gauge standard
16-gauge, 14-gauge optional
Liners: 20-gauge standard
18-gauge, 16-gauge, 14-gauge optional

*When heavy gauge liners are selected for partially recessed and fully recessed units, the liners are supplied in painted CRS.

Convector Specifications

DAMPERS

Provide factory installed knob-operated dampers for Convectors where noted. The operator is to be a fast-action, triple lead screw, knob operated for ease of adjustment.

ACCESS DOORS

Where noted, Convectors shall be provided with access doors. Access doors shall be 4 1/4" x 4 1/4" and shall be located in the non-louvered area*. Access doors shall be hinged on top with straight shaft type hinge and secured by a consealed 1/4 turn hex-head operator.

On units 24" high or less, consult factory for available door locations. For units without end pockets at access door locations, an adjustment must be made in the output ratings stated on pages 6 thru 11. See Table 5 on page 12 for derating percentage reductions. No access door available on 14" high units.

*Note: Refer to page 2 for Standard Access Door Locations.

For units with 14, 16 or 18 inch high liners and grilled (louvered) inlet, a louver bank will be omitted. When Access Doors 3, 4, 5 or 6 are selected, see Table 5 for derating factors.

END POCKETS

Where noted, Convectors shall be provided with 4" end pockets (right end only) (left end only) (both ends). End pocket shall consist of the cabinet extended in length as noted with 20-gauge CRS baffle spot welded to back of cabinet extending from heating element to air outlet louvers. One end pocket only 64" long units. No end pockets on 64" SR-A or RF-A units.

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.

INSTITUTIONAL CABINETS

Furnish and install institutional-type Convectors where indicated. Cabinets shall be as described previously under the specific type except that tamper-resistant fasteners (Hex Head Screws) (Hex Head Concealed Locks) shall be provided. (Dampers and access doors where required shall be provided with Hex Head operators).

OPTIONAL EQUIPMENT

Among optional equipment features available with these Convectors are the following:

1. Damper with Knob Operator. Detailed description on page 3.
2. Access Door. Provided only when specifically ordered, hinged for easy access to valves or vents.*
3. Knock-outs on sides of cabinet are optional and will be provided only when specifically ordered.

Special models of these Convectors can also incorporate such special design features as integral inlet grilles, insulation, special gauge thickness of enclosure, special fasteners to meet unusual requirements, and various institutional type features as described on page 3.

*Note: Refer to page 2 for Standard Access Door Locations.

For units with 14, 16 or 18 inch high liners and grilled (louvered) inlet, a louver bank will be omitted. When Access Doors 3, 4, 5 or 6 are selected, see Table 5 for derating factors.

UNIT SIZE SELECTION

Example: Required, a type SW-A convector having an MBH capacity of 14.0, 190°F average water temperature with 20°F temperature drop. Turn to page 11, and using the table for 190°F average water locate a rating of 14.0 or greater. In the columns at the left edge of the table you will find the depth and height of the unit and in the space at the top of the column containing the rating, you will find the length of the unit. It will be noted that several units meet the requirements listed. Select the size which best suits the application.

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.

Example: Required, an FS-A convector having 40.5 EDR at 215°F steam. Select size 6-40-24 from table #1 on page 6, which furnishes 40.9 EDR, or any other size furnishing 40.5 or more EDR. If the requirements are given in BTU's per hour (steam system) divide the BTU requirements by 240 to obtain the EDR capacity required and select the convector direct from table 1 and 2.

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