

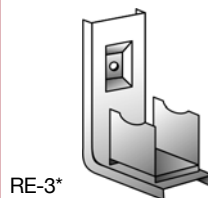
RAY VECTOR

WALL - FIN ENCLOSURES
HYDRONIC HEATING

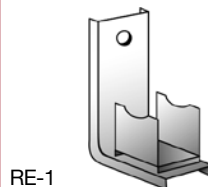


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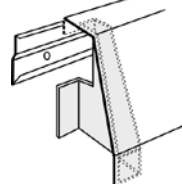
BARE ELEMENT SUPPORT



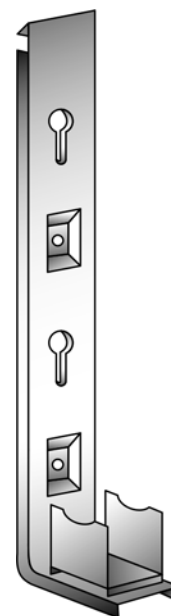
ELEMENT SUPPORT FOR 2nd or 3rd ROW



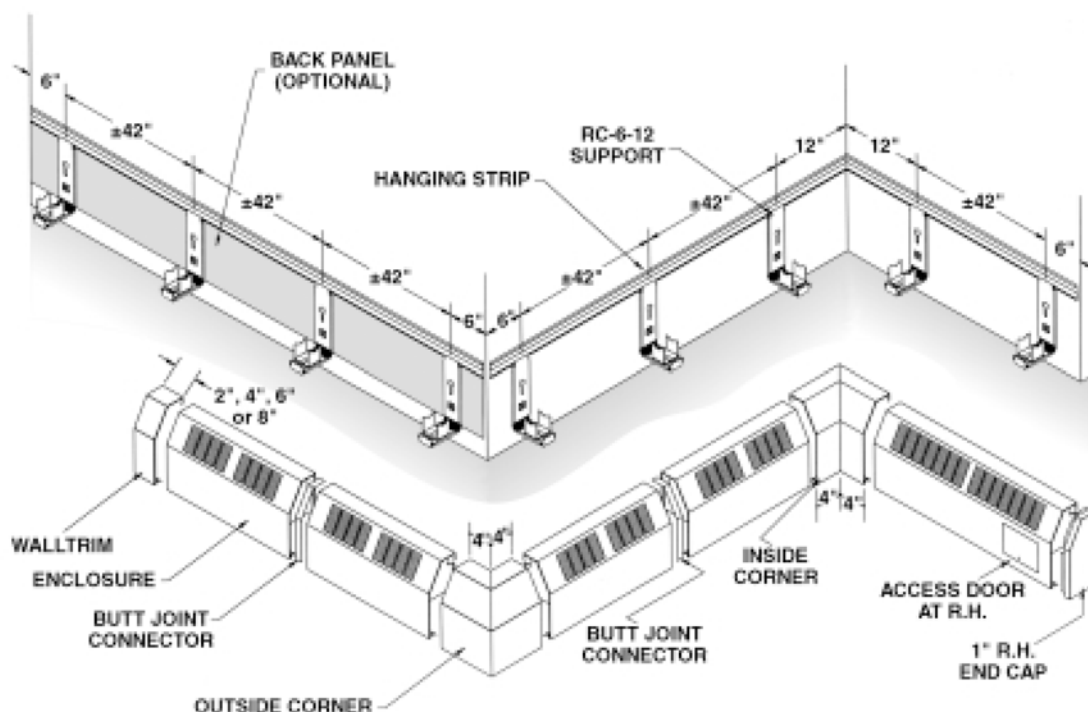
TOP SUPPORT WELDED TO CABINET



ELEMENT SUPPORT FOR 1, 2 OR 3 ROWS FOR BOTTOM GRILLE CABINETS ONLY



* On heights greater than 24"



A UNIQUE DESIGN

Allows installer a fast and easy alignment, using only one levelled line at the top of enclosure. Once hanging strip is installed, the cabinet supports can be hooked to the hanging strip and fastened to wall at bottom. This will ensure perfect alignment of the top and bottom of the enclosure.

RAY VECTOR ENCLOSURES

Enclosures are manufactured in a wide variety of models designed under the ROSEMEX tradition of aesthetics, durability, strength and ease of installation. Most models consist of element and cabinet supports hung from a continuous hanging strip. Enclosure lengths are assembled together using concealed joiner strips to give a single unit look in every room. The unique ROSEMEX cabinet support design enables the installer to simply clip the bottom of the enclosure to the support. Enclosures are made of quality cold rolled steel, 18, 16 or 14 gauge, formed and reinforced with top supports, degreased, phosphatized and coated inside and out with a corrosion resistant tan primer. Panels are manufactured in lengths of 2'0" to 8'0" by 6" increments. A wide variety of accessories are also available to suit your requirements.

ELEMENTS

Elements are either non-ferrous (seamless copper tube with aluminum fins) or ferrous (firm steel tube with steel fin). For both types of elements, the tubes are expanded within the fins to obtain a permanent thermal bond between the two. These are manufactured in lengths of 1'0" to 10'0" by 6" increments. Both elements can be used on either steam or hot water systems.

NON-FERROUS ELEMENTS, TYPES 34C & 44C

These elements are used for their high heat transfer properties and optimum output. They are manufactured with either 3" x 4" or 4" x 4" fins formed with an integral collar for uniform spacing. All tube ends are manufactured to receive standard sweat fittings. ROSEMEX elements are designed for use at 250 P.S.I. or 300°F E.W.T. maximum working conditions.

FERROUS ELEMENTS, TYPE 44S

These elements are used for their sturdiness and are manufactured with 4" x 4" steel fins. The fins are formed with an integral collar for uniform spacing. All tube ends are factory threaded, ready to receive standard 1 1/4" I.P.S. fittings. ROSEMEX steel elements are designed for use at 250 P.S.I. or 300°F E.W.T. maximum working conditions.

ACCESSORIES

END PIECE

End pieces are used to close off enclosure ends when cabinets do not terminate on an adjacent wall. The end piece is manufactured with rounded corners and protrudes 1" beyond enclosure to give a neat finished appearance.

WALL TRIM

Joiners are manufactured to overlap enclosures and cover the gap between cabinet end and adjacent wall or columns. These are usually supplied in 4", 5", 6" or 8" lengths. CONCEALED JOINER (butt joint) Otherwise known as "butt joint connector", this piece fits between two enclosure lengths to give a clean hairline joint appearance to the installation.

INSIDE CORNER

Inside corners are manufactured to overlap enclosures and are used when piping runs on two or more inside walls to meet heating requirements. These are usually supplied at 90° angles, however may be modified to meet project conditions.

OUTSIDE CORNER

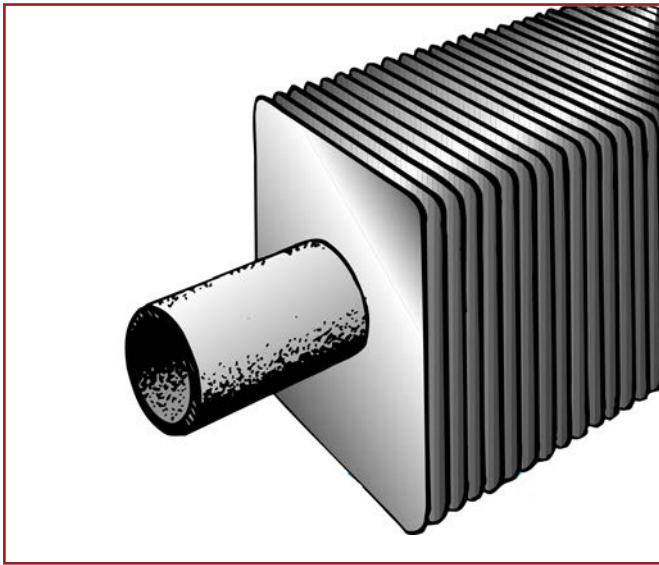
Outside corners are manufactured to overlap enclosures and are used when piping runs on two or more outside walls to meet heating requirements. These are usually supplied at 90° angles, however may be modified to meet project conditions.

ACCESS DOORS

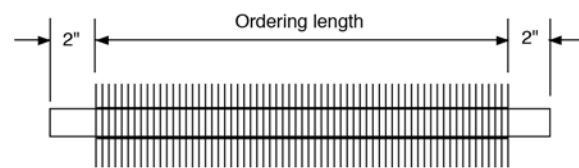
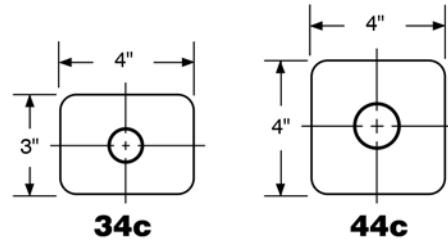
Access doors are manufactured to permit access to valves or other controls located inside enclosure. Two types are available, factory installed 5" x 7" or field mounted 5" x 7" with frame. They are supplied as standard with a screw lock, however a camlock type is also available. For field mounted access doors, the contractor is required to perforate the enclosure.

PIPE COVERS

Pipe covers are used to hide pipes that run around a column. These are supplied in 5", 11" or 17" heights and are 3 3/4" deep.



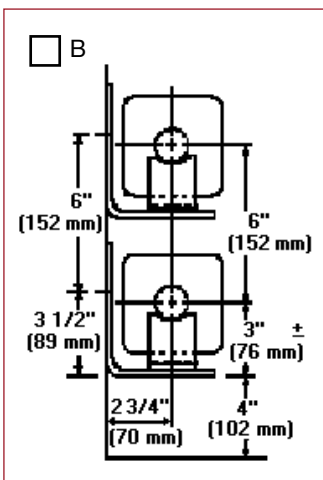
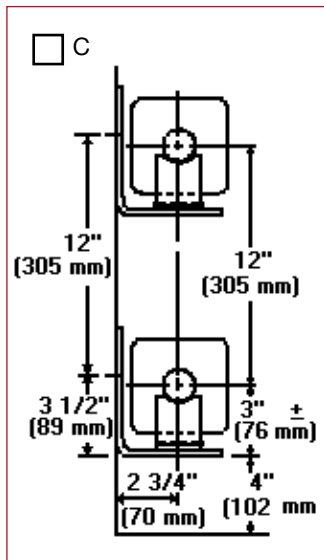
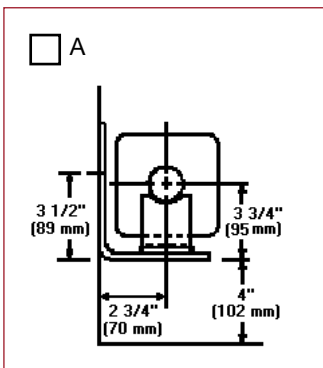
TYPE RAF
SERIES 34C, 44C
ALUMINUM FINS / COPPER TUBE



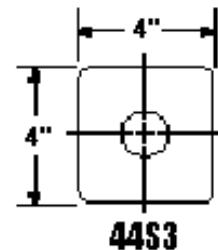
Available in lengths of 1'0" to 10'0" in 6" increments.

Copper aluminum heating elements are manufactured of seamless copper tube and aluminum fins permanently bonded by mechanical process. Available in 3/4", 1" and 1 1/4" copper tube sizes, allow you to select the output and capacity to suit every requirement.

ARRANGEMENTS



TYPE RSF
SERIES 44S3
STEEL FINS / STEEL TUBE



Available in lengths of
1'0" to 10'0" in 6" increments

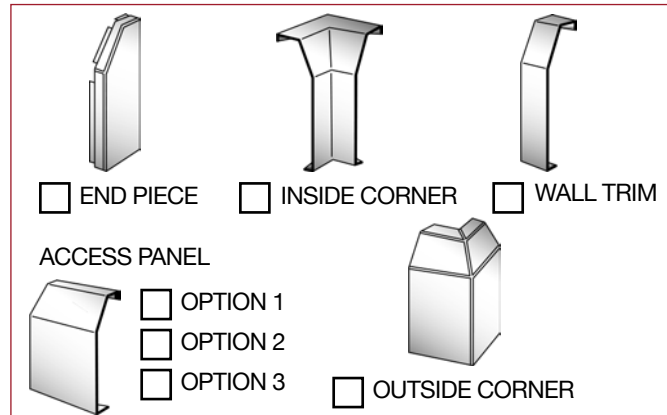
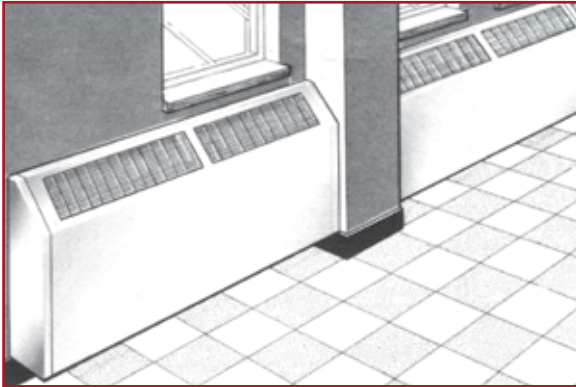
Steel elements are constructed of 1 1/4" E.R.W. steel pipes and cold rolled steel fins, permanently bonded by mechanical process. They are hydrostatically tested and coated with corrosion protecting paint. Pipe extremities are threaded or may be chamfered for welding if required.

N.B.: Ball bearing supports supplied for this type of element.

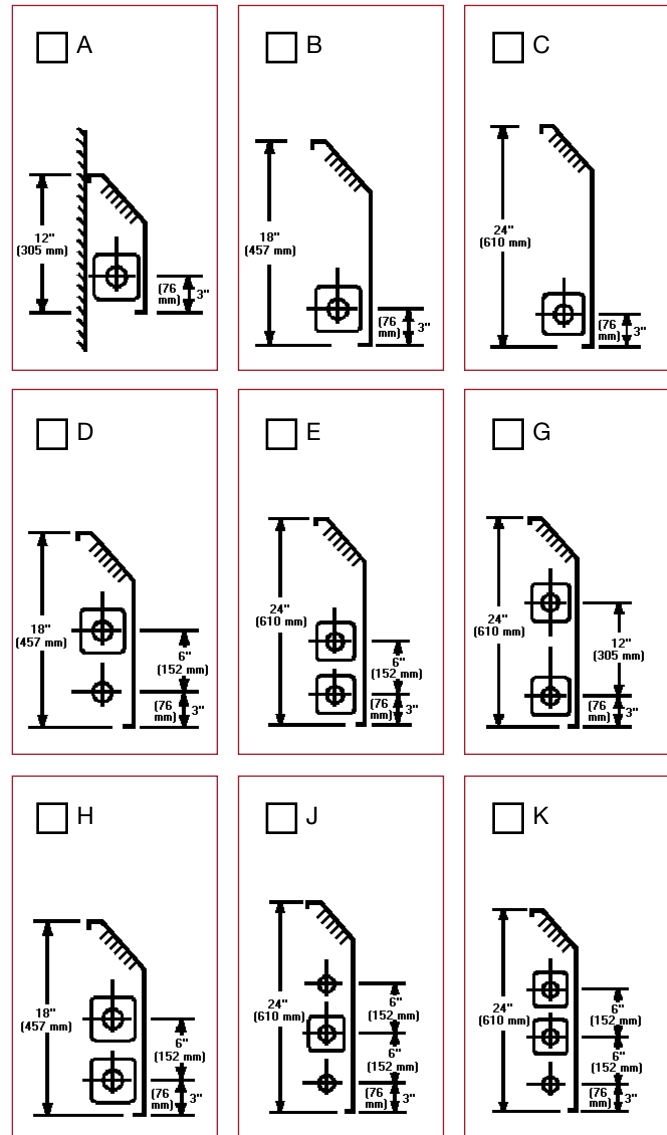
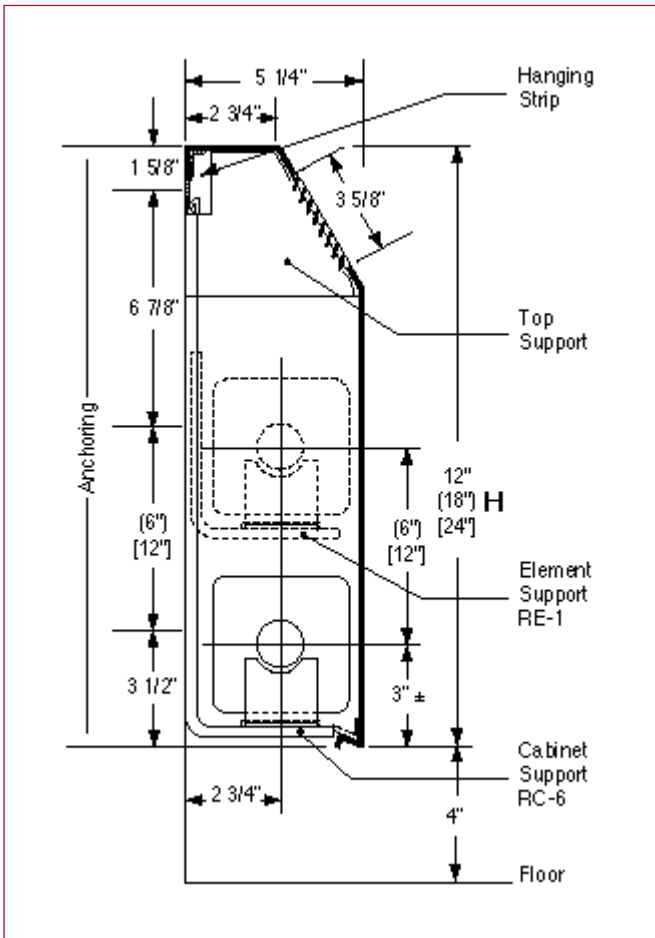
BARE ELEMENT CAPACITIES

TYPE RAF				ALUMINUM FINS / COPPER TUBE													
ELEMENT		ARRANGEMENTS	ELEMENTS C/C (INCHES)	BTU/HR/LIN. FT. 65°F ENT. AIR													
NO.	DIM.			STEAM 1 PSIG	AVERAGE WATER TEMP. °F												
					220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A		1508	1583	1432	1296	1176	1040	919	799	678	603	497	392	301	226
		B	6	2499	2623	2374	2149	1949	1724	1524	1324	1124	999	824	649	499	374
	52 fins/ft	C	12	3053	3205	2900	2625	2381	2106	1862	1618	1373	1221	1007	793	610	457
RAF 34C1	3"x4" x 3/4"	A		1278	1341	1214	1099	996	881	779	677	575	511	421	332	255	191
		B	6	2117	2222	2011	1820	1651	1460	1291	1122	952	846	698	550	423	317
	52 fins/ft	C	12	2587	2716	2457	2224	2017	1785	1578	1371	1164	1034	853	672	517	388
RAF 44C2	4"x4" x 1"	A		1516	1591	1440	1303	1182	1046	924	803	682	606	500	394	303	227
		B	6	2513	2638	2387	2161	1960	1733	1532	1331	1130	1005	829	653	502	376
	52 fins/ft	C	12	3071	3224	2917	2641	2395	2118	1873	1627	1381	1228	1013	798	614	460
RAF 34C2	3"x4" x 1"	A		1285	1349	1220	1105	1002	886	783	681	578	514	424	334	257	192
		B	6	2129	2235	2022	1830	1660	1469	1298	1128	958	851	702	553	425	319
	52 fins/ft	C	12	2603	2733	2472	2238	2030	1796	1587	1379	1171	1041	858	676	520	390
RAF 44C3	4"x4" x 1-1/4"	A		1525	1601	1448	1311	1189	1052	930	808	686	610	503	396	305	228
		B	6	2528	2654	2401	2174	1971	1744	1542	1339	1137	1011	834	657	505	379
	52 fins/ft	C	12	3089	3243	2934	2656	2409	2131	1884	1637	1390	1235	1019	803	617	463
RAF 34C3	3"x4" x 1-1/4"	A		1293	1357	1228	1111	1008	892	788	685	581	517	426	336	258	193
		B	6	2142	2249	2034	1842	1670	1477	1306	1135	963	856	706	556	428	321
	48 fins/ft	C	12	2618	2748	2487	2251	2042	1806	1596	1387	1178	1047	863	680	523	392
TYPE RSF				STEEL FINS / STEEL TUBE													
RSF 44S3	4"x4" x 1-1/4"	A		1267	1330	1203	1089	988	874	772	671	570	506	418	329	253	190
		B	6	2129	2235	2022	1830	1660	1469	1298	1128	958	851	702	553	425	319
	48 fins/ft	C	12	2580	2709	2451	2218	2012	1780	1573	1367	1161	1032	851	670	516	387

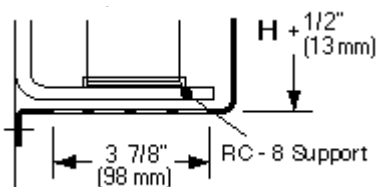
Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



ARRANGEMENTS



☐ TYPE RVS - G (Bottom grille optional)



Due to the air restriction, reduce capacities by 7 %.

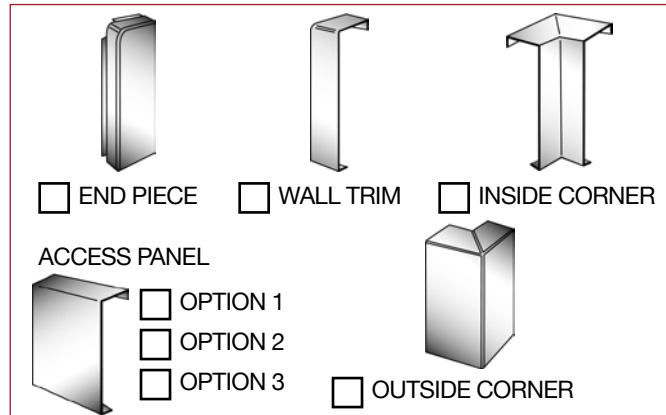
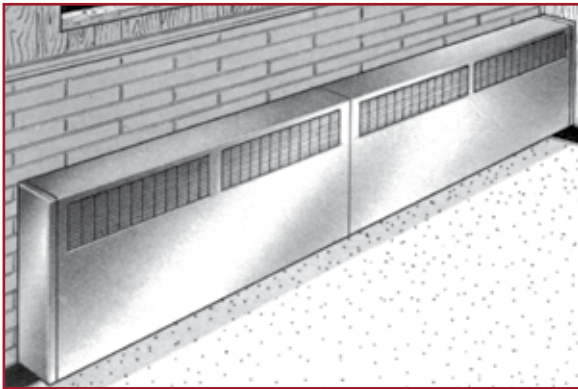
RVS

CAPACITIES

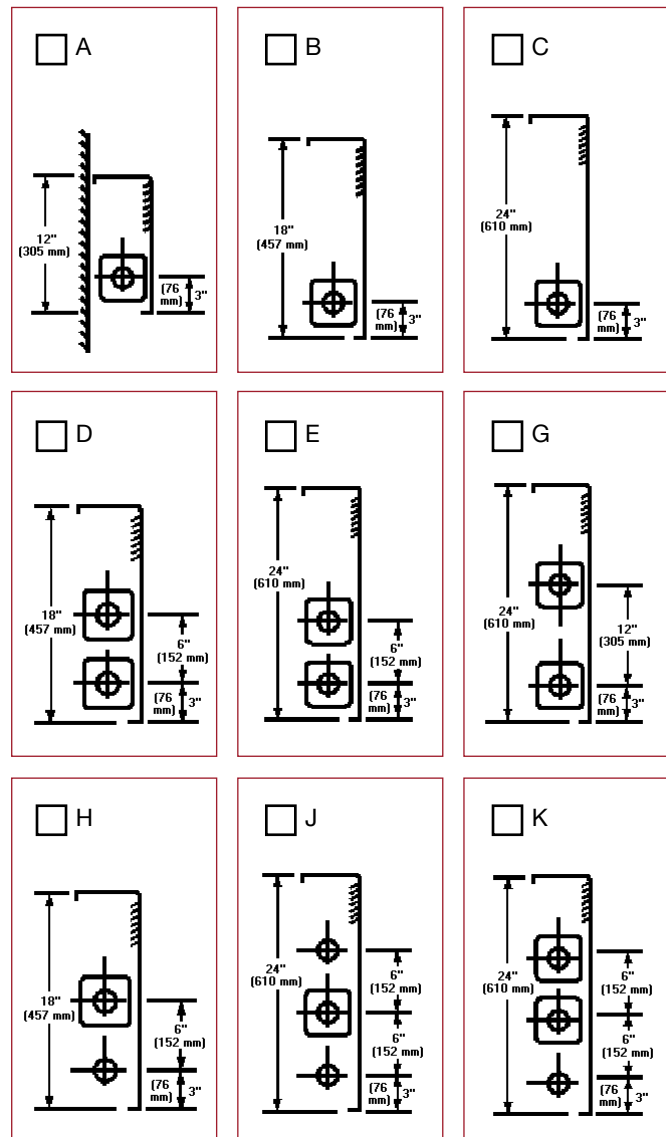
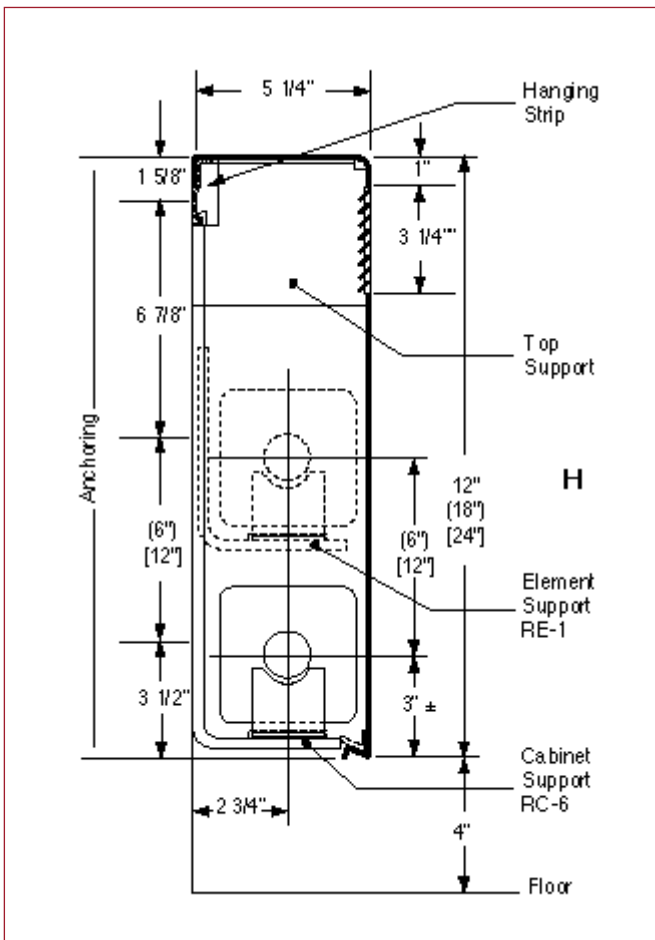


TYPE RAF					ALUMINUM FINS / COPPER TUBE													
ELEMENT		ARRANGEMENTS		ELEMENTS C/C (INCHES)	BTU/HR/LIN. FT. 65°F ENT. AIR													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMP. °F												
						220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A	H		1696	1780	1611	1458	1322	1170	1034	898	763	678	559	440	339	254
		B	J		1881	1975	1786	1617	1467	1297	1147	996	846	752	620	489	376	282
		C			1970	2068	1871	1694	1536	1359	1201	1044	886	788	650	512	394	295
	52 fins/ft	D	K	6	2435	2556	2313	2094	1899	1680	1485	1290	1095	974	803	633	487	365
		E		6	2560	2688	2432	2201	1996	1766	1561	1356	1152	1024	844	665	512	384
		G		12	2945	3092	2797	2532	2297	2032	1796	1560	1325	1178	971	765	589	441
RAF 34C1	3"x4" x 3/4"	A	H		1437	1508	1365	1235	1120	991	876	761	646	574	474	373	287	215
		B	J		1594	1673	1514	1370	1243	1099	972	844	717	637	526	414	318	239
		C			1669	1752	1585	1435	1301	1151	1018	884	751	667	550	433	333	250
	52 fins/ft	D	K	6	2064	2167	1960	1775	1609	1424	1259	1093	928	825	681	536	412	309
		E		6	2169	2277	2060	1865	1691	1496	1323	1149	976	867	715	563	433	325
		G		12	2496	2620	2371	2146	1946	1722	1522	1322	1123	998	823	648	499	374
RAF 44C2	4"x4" x 1"	A	H		1705	1790	1619	1466	1329	1176	1040	903	767	682	562	443	341	255
		B	J		1892	1986	1797	1627	1475	1305	1154	1002	851	756	624	491	378	283
		C			1982	2081	1882	1704	1545	1367	1209	1050	891	792	654	515	396	297
	52 fins/ft	D	K	6	2450	2572	2327	2107	1911	1690	1494	1298	1102	980	808	637	490	367
		E		6	2576	2704	2447	2215	2009	1777	1571	1365	1159	1030	850	669	515	386
		G		12	2962	3110	2813	2547	2310	2043	1806	1569	1332	1184	977	770	592	444
RAF 34C2	3"x4" x 1"	A	H		1445	1517	1372	1242	1127	997	881	765	650	578	476	375	289	216
		B	J		1603	1683	1522	1378	1250	1106	977	849	721	641	528	416	320	240
		C			1679	1762	1595	1443	1309	1158	1024	889	755	671	554	436	335	251
	52 fins/ft	D	K	6	2076	2179	1972	1785	1619	1432	1266	1100	934	830	685	539	415	311
		E		6	2182	2291	2072	1876	1701	1505	1331	1156	981	872	720	567	436	327
		G		12	2510	2635	2384	2158	1957	1731	1531	1330	1129	1004	828	652	502	376
RAF 44C3	4"x4" x 1-1/4"	A	H		1715	1800	1629	1474	1337	1183	1046	908	771	686	565	445	343	257
		B	J		1903	1998	1807	1636	1484	1313	1160	1008	856	761	627	494	380	285
		C			1993	2092	1893	1713	1554	1375	1215	1056	896	797	657	518	398	298
	48 fins/ft	D	K	6	2464	2587	2340	2119	1921	1700	1503	1305	1108	985	813	640	492	369
		E		6	2591	2720	2461	2228	2020	1787	1580	1373	1165	1036	855	673	518	388
		G		12	2979	3127	2830	2561	2323	2055	1817	1578	1340	1191	983	774	595	446
RAF 34C3	3"x4" x 1-1/4"	A	H		1454	1526	1381	1250	1134	1003	886	770	654	581	479	378	290	218
		B	J		1612	1692	1531	1386	1257	1112	983	854	725	644	531	419	322	241
		C			1688	1772	1603	1451	1316	1164	1029	894	759	675	557	438	337	253
	48 fins/ft	D	K	6	2088	2192	1983	1795	1628	1440	1273	1106	939	835	689	542	417	313
		E		6	2195	2304	2085	1887	1712	1514	1338	1163	987	878	724	570	439	329
		G		12	2525	2651	2398	2171	1969	1742	1540	1338	1136	1010	833	656	505	378
TYPE RSF																		
STEEL FINS / STEEL TUBE																		
RSF 44S3	4"x4" x 1-1/4"	A	H		1370	1438	1301	1178	1068	945	835	726	616	548	452	356	274	205
		B	J		1513	1588	1437	1301	1180	1043	922	801	680	605	499	393	302	226
		C			1567	1645	1488	1347	1222	1081	955	830	705	626	517	407	313	235
	48 fins/ft	D	K	6	2113	2218	2007	1817	1648	1457	1288	1119	950	845	697	549	422	316
		E		6	2189	2298	2079	1882	1707	1510	1335	1160	985	875	722	569	437	328
		G		12	2366	2484	2247	2034	1845	1632	1443	1253	1064	946	780	615	473	354

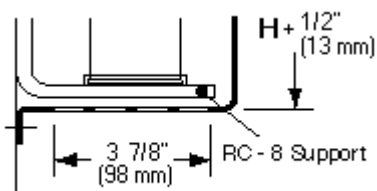
Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



ARRANGEMENTS



☐ TYPE RVF - G (Bottom grille optional)



Due to the air restriction, reduce capacities by 7 %.

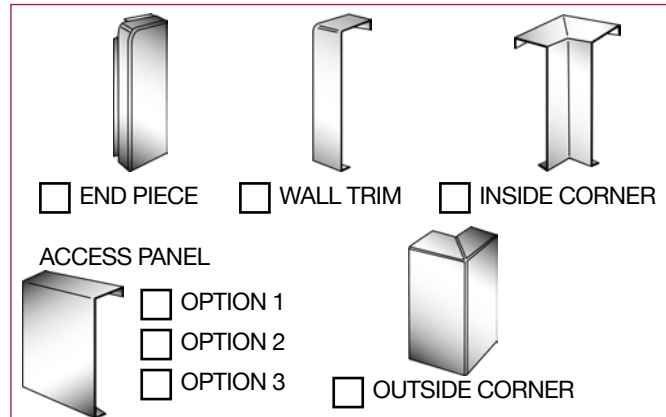
RVF

CAPACITIES

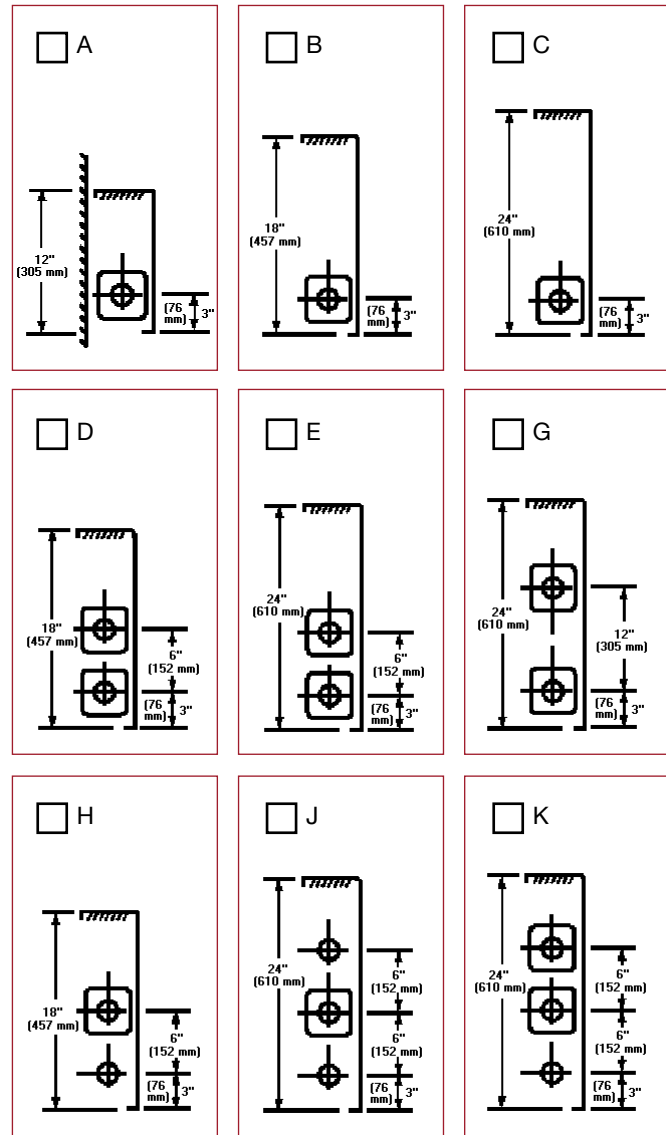
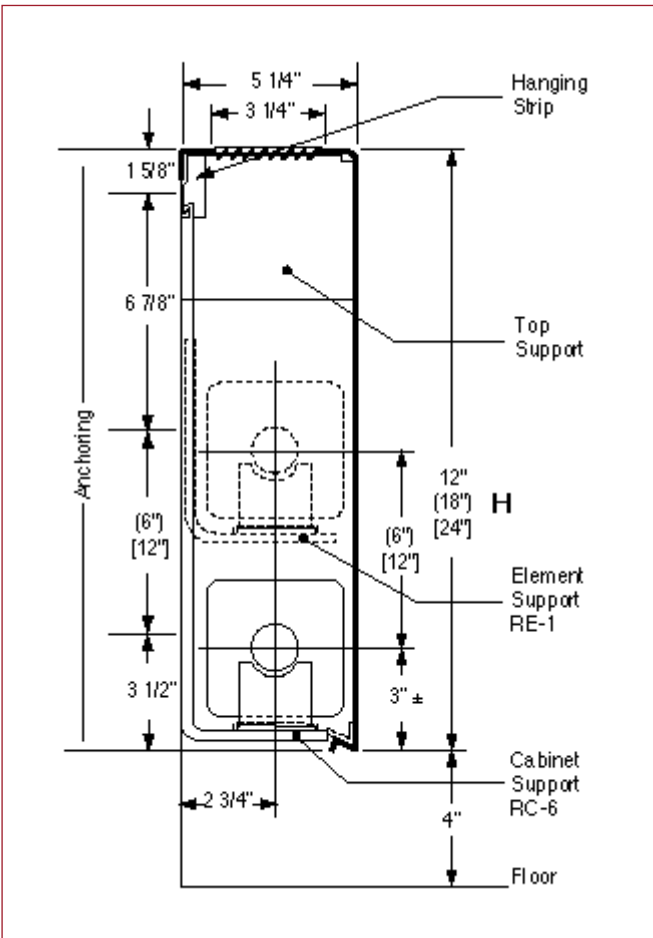


TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F												
						220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A	H		1651	1733	1568	1419	1287	1139	1007	875	742	660	544	429	330	247
		B	J		1831	1922	1739	1574	1428	1263	1116	970	823	732	604	476	366	274
		C			1950	2047	1852	1677	1521	1345	1189	1033	877	780	643	507	390	292
	52 fins/ft	D	K	6	2335	2451	2218	2008	1821	1611	1424	1237	1050	934	770	607	467	350
		E		6	2503	2628	2377	2152	1952	1727	1526	1326	1126	1001	825	650	500	375
		G		12	2846	2988	2703	2447	2219	1963	1736	1508	1280	1138	939	739	569	426
RAF 34C1	3"x4" x 3/4"	A	H		1398	1467	1328	1202	1090	964	852	740	629	559	461	363	279	209
		B	J		1551	1628	1473	1333	1209	1070	946	822	697	620	511	403	310	232
		C			1652	1734	1569	1420	1288	1139	1007	875	743	660	545	429	330	247
	52 fins/ft	D	K	6	1978	2076	1879	1701	1542	1364	1206	1048	890	791	652	514	395	296
		E		6	2121	2227	2014	1824	1654	1463	1293	1124	954	848	699	551	424	318
		G		12	2411	2531	2290	2073	1880	1663	1470	1277	1084	964	795	626	482	361
RAF 44C2	4"x4" x 1"	A	H		1660	1743	1577	1427	1294	1145	1012	879	747	664	547	431	332	249
		B	J		184	193	174	158	143	126	112	97	82	73	60	47	36	27
		C			1961	2059	1862	1686	1529	1353	1196	1039	882	784	647	509	392	294
	52 fins/ft	D	K	6	2349	2466	2231	2020	1832	1620	1432	1244	1057	939	775	610	469	352
		E		6	2518	2643	2392	2165	1964	1737	1535	1334	1133	1007	830	654	503	377
		G		12	2863	3006	2719	2462	2233	1975	1746	1517	1288	1145	944	744	572	429
RAF 34C2	3"x4" x 1"	A	H		1406	1476	1335	1209	1096	970	857	745	632	562	463	365	281	210
		B	J		1560	1638	1482	1341	1216	1076	951	826	702	624	514	405	312	234
		C			1662	1745	1578	1429	1296	1146	1013	880	747	664	548	432	332	249
	52 fins/ft	D	K	6	1989	2088	1889	1710	1551	1372	1213	1054	895	795	656	517	397	298
		E		6	2133	2239	2026	1834	1663	1471	1301	1130	959	853	703	554	426	319
		G		12	2511	2636	2385	2159	1958	1732	1531	1330	1129	1004	828	652	502	376
RAF 44C3	4"x4" x 1-1/4"	A	H		1669	1752	1585	1435	1301	1151	1018	884	751	667	550	433	333	250
		B	J		1851	1943	1758	1591	1443	1277	1129	981	832	740	610	481	370	277
		C			1972	2070	1873	1695	1538	1360	1202	1045	887	788	650	512	394	295
	48 fins/ft	D	K	6	2362	2480	2243	2031	1842	1629	1440	1251	1062	944	779	614	472	354
		E		6	2532	2658	2405	2177	1974	1747	1544	1341	1139	1012	835	658	506	379
		G		12	2880	3024	2736	2476	2246	1987	1756	1526	1296	1152	950	748	576	432
RAF 34C3	3"x4" x 1-1/4"	A	H		1414	1484	1343	1216	1102	975	862	749	636	565	466	367	282	212
		B	J		1569	1647	1490	1349	1223	1082	957	831	706	627	517	407	313	235
		C			1671	1754	1587	1437	1303	1152	1019	885	751	668	551	434	334	250
	48 fins/ft	D	K	6	2001	2101	1900	1720	1560	1380	1220	1060	900	800	660	520	400	300
		E		6	2145	2252	2037	1844	1673	1480	1308	1136	965	858	707	557	429	321
		G		12	2525	2651	2398	2171	1969	1742	1540	1338	1136	1010	833	656	505	378
TYPE RSF		STEEL FINS / STEEL TUBE																
RSF 44S3	4"x4" x 1-1/4"	A	H		1313	1378	1247	1129	1024	905	800	695	590	525	433	341	262	196
		B	J		1420	1491	1349	1221	1107	979	866	752	639	568	468	369	284	213
		C			1455	1527	1382	1251	1134	1003	887	771	654	582	480	378	291	218
	48 fins/ft	D	K	6	1996	2095	1896	1716	1556	1377	1217	1057	898	798	658	518	399	299
		E		6	2057	2159	1954	1769	1604	1419	1254	1090	925	822	678	534	411	308
		G		12	2292	2406	2177	1971	1787	1581	1398	1214	1031	916	756	595	458	343

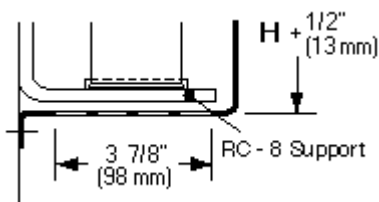
Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



ARRANGEMENTS



☐ TYPE RVT - G (Bottom grille optional)



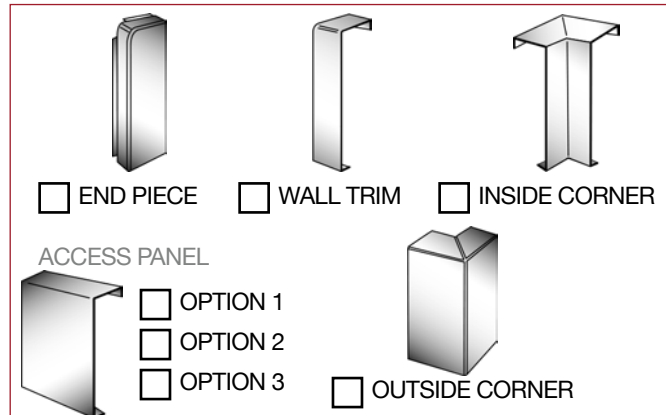
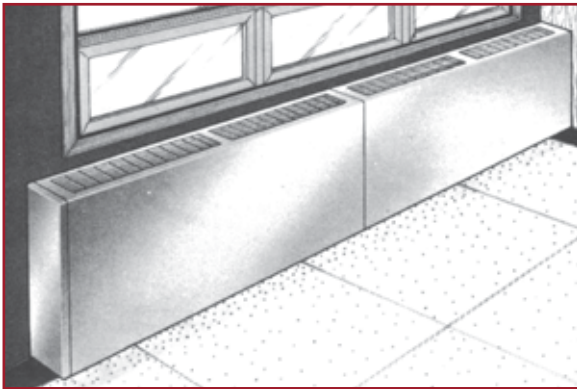
Due to the air restriction, reduce capacities by 7 %.

RVT CAPACITIES

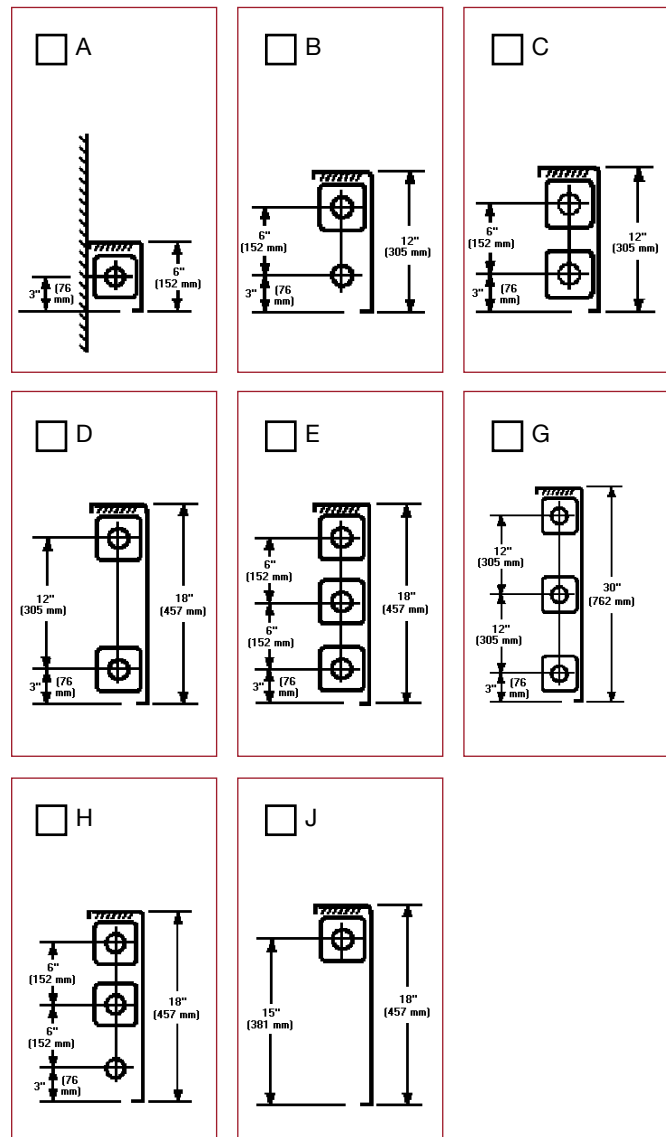
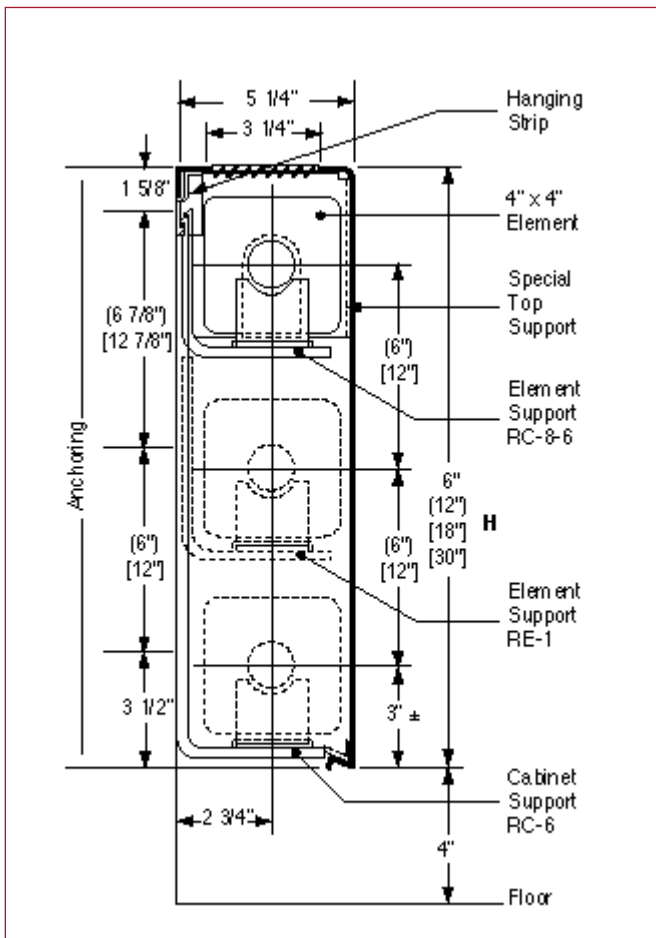


TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F												
					220	210	200	190	180	170	160	150	140	130	120	110	100	
RAF 44C1	4"x4" x 3/4"	A	H		1781	1870	1691	1531	1389	1228	1086	943	801	712	587	463	356	267
		B	J		1985	2084	1885	1707	1548	1369	1210	1052	893	794	655	516	397	297
		C			2123	2229	2016	1825	1655	1464	1295	1125	955	849	700	551	424	318
	52 fins/ft	D	K	6	2628	2759	2496	2260	2049	1813	1603	1392	1182	1051	867	683	525	394
		E		6	2780	2919	2641	2390	2168	1918	1695	1473	1251	1112	917	722	556	417
		G		12	3019	3169	2868	2596	2354	2083	1841	1600	1358	1207	996	784	603	452
RAF 34C1	3"x4" x 3/4"	A	H		1509	1584	1433	1297	1177	1041	920	799	679	603	497	392	301	226
		B	J		1681	1765	1596	1445	1311	1159	1025	890	756	672	554	437	336	252
		C			1799	1888	1709	1547	1403	1241	1097	953	809	719	593	467	359	269
	52 fins/ft	D	K	6	2227	2338	2115	1915	1737	1536	1358	1180	1002	890	734	579	445	334
		E		6	2356	2473	2238	2026	1837	1625	1437	1248	1060	942	777	612	471	353
		G		12	2559	2686	2431	2200	1996	1765	1560	1356	1151	1023	844	665	511	383
RAF 44C2	4"x4" x 1"	A	H		1791	1880	1701	1540	1396	1235	1092	949	805	716	591	465	358	268
		B	J		1997	2096	1897	1717	1557	1377	1218	1058	898	798	659	519	399	299
		C			2135	2241	2028	1836	1665	1473	1302	1131	960	854	704	555	427	320
	52 fins/ft	D	K	6	2644	2776	2511	2273	2062	1824	1612	1401	1189	1057	872	687	528	396
		E		6	2797	2936	2657	2405	2181	1929	1706	1482	1258	1118	923	727	559	419
		G		12	3037	3188	2885	2611	2368	2095	1852	1609	1366	1214	1002	789	607	455
RAF 34C2	3"x4" x 1"	A	H		1517	1592	1441	1304	1183	1046	925	804	682	606	500	394	303	227
		B	J		1698	1782	1613	1460	1324	1171	1035	899	764	679	560	441	339	254
		C			1809	1899	1718	1555	1411	1248	1103	958	814	723	596	470	361	271
	52 fins/ft	D	K	6	2240	2352	2128	1926	1747	1545	1366	1187	1008	896	739	582	448	336
		E		6	2369	2487	2250	2037	1847	1634	1445	1255	1066	947	781	615	473	355
		G		12	2574	2702	2445	2213	2007	1776	1570	1364	1158	1029	849	669	514	386
RAF 44C3	4"x4" x 1-1/4"	A	H		1801	1891	1710	1548	1404	1242	1098	954	810	720	594	468	360	270
		B	J		2009	2109	1908	1727	1567	1386	1225	1064	904	803	662	522	401	301
		C			2148	2255	2040	1847	1675	1482	1310	1138	966	859	708	558	429	322
	48 fins/ft	D	K	6	2659	2791	2526	2286	2074	1834	1621	1409	1196	1063	877	691	531	398
		E		6	2813	2953	2672	2419	2194	1940	1715	1490	1265	1125	928	731	562	421
		G		12	3055	3207	2902	2627	2382	2107	1863	1619	1374	1222	1008	794	611	458
RAF 34C3	3"x4" x 1-1/4"	A	H		1526	1602	1449	1312	1190	1052	930	808	686	610	503	396	305	228
		B	J		1708	1793	1622	1468	1332	1178	1041	905	768	683	563	444	341	256
		C			1819	1909	1728	1564	1418	1255	1109	964	818	727	600	472	363	272
	48 fins/ft	D	K	6	2253	2365	2140	1937	1757	1554	1374	1194	1013	901	743	585	450	337
		E		6	2383	2502	2263	2049	1858	1644	1453	1262	1072	953	786	619	476	357
		G		12	2589	2718	2459	2226	2019	1786	1579	1372	1165	1035	854	673	517	388
TYPE RSF				STEEL FINS / STEEL TUBE														
RSF 44S3	4"x4" x 1-1/4"	A	H		1406	1476	1335	1209	1096	970	857	745	632	562	463	365	281	210
		B	J		1522	1598	1445	1308	1187	1050	928	806	684	608	502	395	304	228
		C			1574	1652	1495	1353	1227	1086	960	834	708	629	519	409	314	236
	48 fins/ft	D	K	6	2049	2151	1946	1762	1598	1413	1249	1085	922	819	676	532	409	307
		E		6	2168	2276	2059	1864	1691	1495	1322	1149	975	867	715	563	433	325
		G		12	2410	2530	2289	2072	1879	1662	1470	1277	1084	964	795	626	482	361

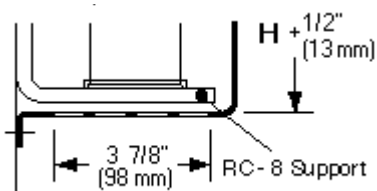
Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



ARRANGEMENTS



☐ TYPE RVE - G (Bottom grille optional)



Due to the air restriction, reduce capacities by 7 %.

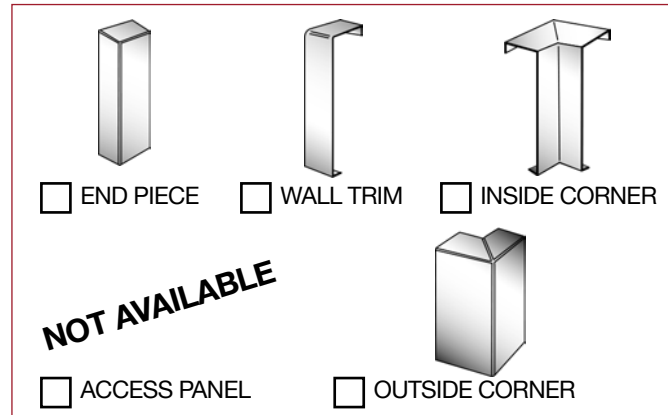
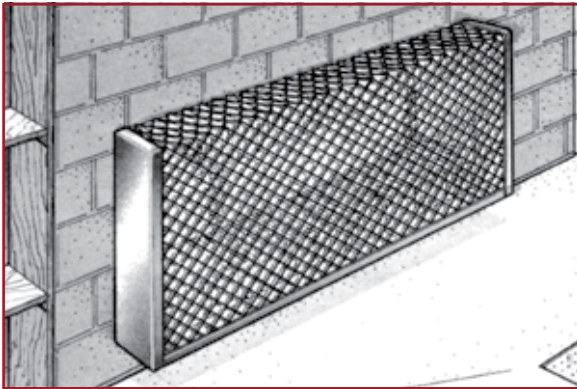
RVE

CAPACITIES

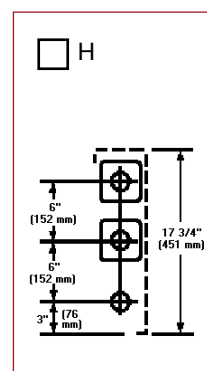
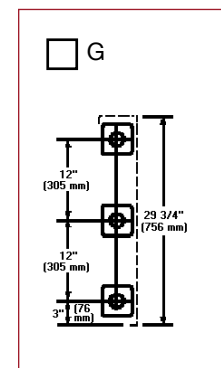
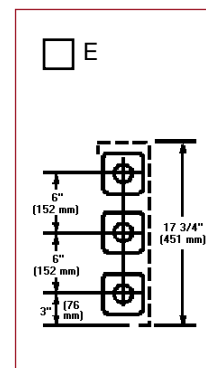
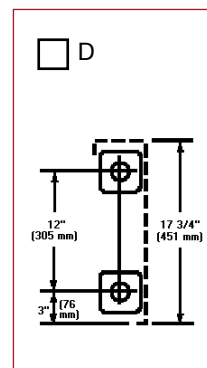
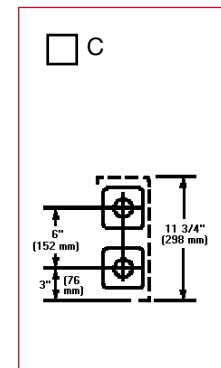
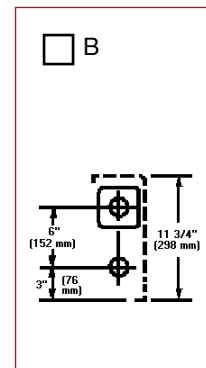
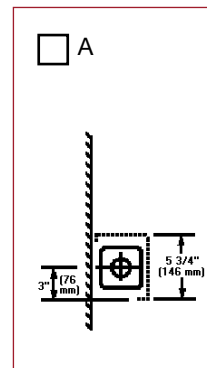
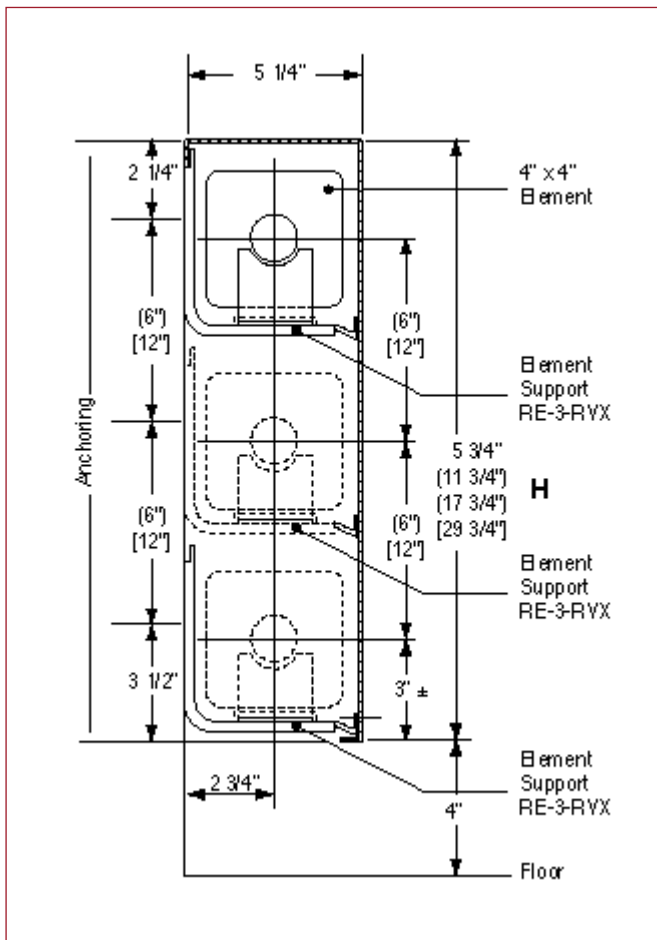


TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F												
					220	210	200	190	180	170	160	150	140	130	120	110	100	
RAF 44C1	4"x4" x 3/4"	A	H		1369	1437	1300	1177	1067	944	835	725	616	547	451	355	273	205
		B	J		1369	1437	1300	1177	1067	944	835	725	616	547	451	355	273	205
		C			2142	2249	2034	1842	1670	1477	1306	1135	963	856	706	556	428	321
	52 fins/ft	D	K	6	2594	2723	2464	2230	2023	1789	1582	1374	1167	1037	856	674	518	389
		E		6	2665	2798	2531	2291	2078	1838	1625	1412	1199	1066	879	692	533	399
		G		12	3393	3562	3223	2917	2646	2341	2069	1798	1526	1357	1119	882	678	508
RAF 34C1	3"x4" x 3/4"	A	H		1159	1216	1101	996	904	799	706	614	521	463	382	301	231	173
		B	J		1159	1216	1101	996	904	799	706	614	521	463	382	301	231	173
		C			1815	1905	1724	1560	1415	1252	1107	961	816	726	598	471	363	272
	52 fins/ft	D	K	6	2198	2307	2088	1890	1714	1516	1340	1164	989	879	725	571	439	329
		E		6	2258	2370	2145	1941	1761	1558	1377	1196	1016	903	745	587	451	338
		G		12	2876	3019	2732	2473	2243	1984	1754	1524	1294	1150	949	747	575	431
RAF 44C2	4"x4" x 1"	A	H		1376	1444	1307	1183	1073	949	839	729	619	550	454	357	275	206
		B	J		1376	1444	1307	1183	1073	949	839	729	619	550	454	357	275	206
		C			2155	2262	2047	1853	1680	1486	1314	1142	969	862	711	560	431	323
	52 fins/ft	D	K	6	2610	2740	2479	2244	2035	1800	1592	1383	1174	1044	861	678	522	391
		E		6	2680	2814	2546	2304	2090	1849	1634	1420	1206	1072	884	696	536	402
		G		12	3413	3583	3242	2935	2662	2354	2081	1808	1535	1365	1126	887	682	511
RAF 34C2	3"x4" x 1"	A	H		1166	1224	1107	1002	909	804	711	617	524	466	384	303	233	174
		B	J		1166	1224	1107	1002	909	804	711	617	524	466	384	303	233	174
		C			1825	1916	1733	1569	1423	1259	1113	967	821	730	602	474	365	273
	52 fins/ft	D	K	6	2211	2321	2100	1901	1724	1525	1348	1171	994	884	729	574	442	331
		E		6	2270	2383	2156	1952	1770	1566	1384	1203	1021	908	749	590	454	340
		G		12	2893	3037	2748	2487	2256	1996	1764	1533	1301	1157	954	752	578	433
RAF 44C3	4"x4" x 1-1/4"	A	H		1384	1453	1314	1190	1079	954	844	733	622	553	456	359	276	207
		B	J		1384	1453	1314	1190	1079	954	844	733	622	553	456	359	276	207
		C			2168	2276	2059	1864	1691	1495	1322	1149	975	867	715	563	433	325
	48 fins/ft	D	K	6	2625	2756	2493	2257	2047	1811	1601	1391	1181	1050	866	682	525	393
		E		6	2695	2829	2560	2317	2102	1859	1643	1428	1212	1078	889	700	539	404
		G		12	3433	3604	3261	2952	2677	2368	2094	1819	1544	1373	1132	892	686	514
RAF 34C3	3"x4" x 1-1/4"	A	H		1173	1231	1114	1008	914	809	715	621	527	469	387	304	234	175
		B	J		1173	1231	1114	1008	914	809	715	621	527	469	387	304	234	175
		C			1835	1926	1743	1578	1431	1266	1119	972	825	734	605	477	367	275
	48 fins/ft	D	K	6	2224	2335	2112	1912	1734	1534	1356	1178	1000	889	733	578	444	333
		E		6	2284	2398	2169	1964	1781	1575	1393	1210	1027	913	753	593	456	342
		G		12	2910	3055	2764	2502	2269	2007	1775	1542	1309	1164	960	756	582	436
TYPE RSF				STEEL FINS / STEEL TUBE														
RSF 44S3	4"x4" x 1-1/4"	A	H		1141	1198	1083	981	889	787	696	604	513	456	376	296	228	171
		B	J		1141	1198	1083	981	889	787	696	604	513	456	376	296	228	171
		C			1781	1870	1691	1531	1389	1228	1086	943	801	712	587	463	356	267
	48 fins/ft	D	K	6	2188	2297	2078	1881	1706	1509	1334	1159	984	875	722	568	437	328
		E		6	2250	2362	2137	1935	1755	1552	1372	1192	1012	900	742	585	450	337
		G		12	2784	2923	2644	2394	2171	1920	1698	1475	1252	1113	918	723	556	417

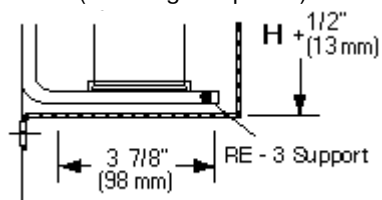
Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



ARRANGEMENTS



TYPE RVX - G (Bottom grille optional)



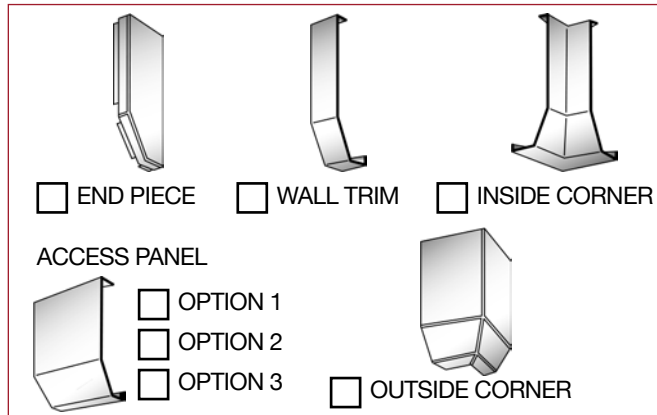
Due to the air restriction, reduce capacities by 7 %.

RVX CAPACITIES



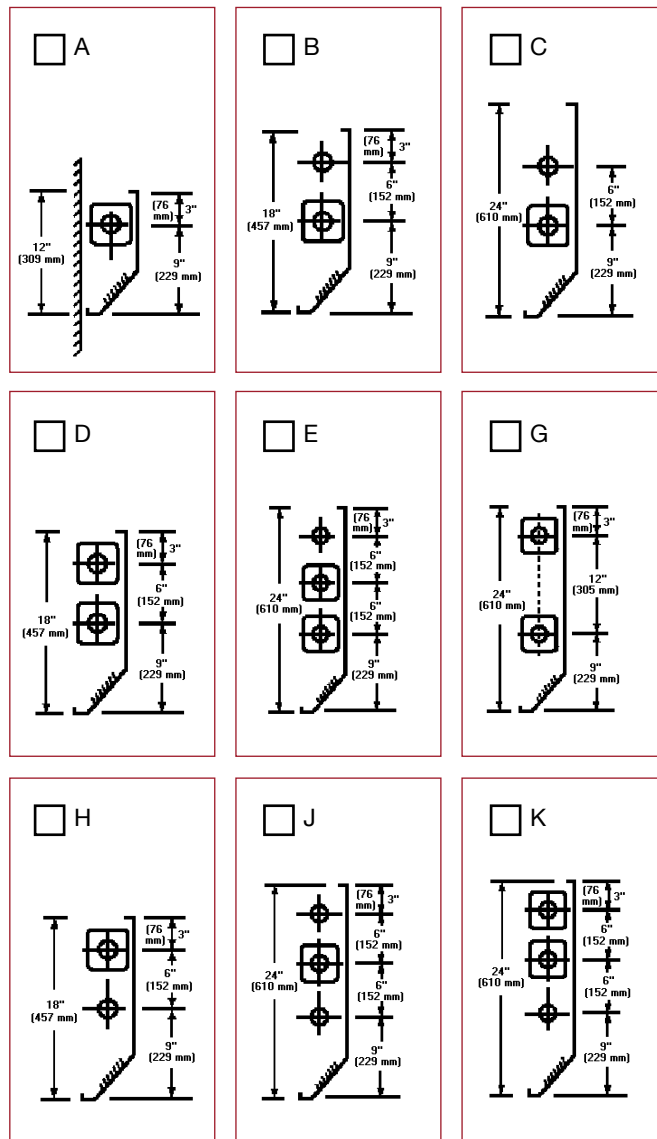
TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F												
					220	210	200	190	180	170	160	150	140	130	120	110	100	
RAF 44C1	4"x4" x 3/4"	A	H		1466	1539	1392	1260	1143	1011	894	776	659	586	483	381	293	219
		B	J		1466	1539	1392	1260	1143	1011	894	776	659	586	483	381	293	219
		C			2440	2562	2318	2098	1903	1683	1488	1293	1098	976	805	634	488	366
	52 fins/ft	D	K	6	2984	3133	2834	2566	2327	2058	1820	1581	1342	1193	984	775	596	447
		E		6	3253	3415	3090	2797	2537	2244	1984	1724	1463	1301	1073	845	650	487
		G		12	4117	4322	3911	3540	3211	2840	2511	2182	1852	1646	1358	1070	823	617
RAF 34C1	3"x4" x 3/4"	A	H		1242	1304	1179	1068	968	856	757	658	558	496	409	322	248	186
		B	J		1242	1304	1179	1068	968	856	757	658	558	496	409	322	248	186
		C			2067	2170	1963	1777	1612	1426	1260	1095	930	826	682	537	413	310
	52 fins/ft	D	K	6	2528	2654	2401	2174	1971	1744	1542	1339	1137	1011	834	657	505	379
		E		6	2757	2894	2619	2371	2150	1902	1681	1461	1240	1102	909	716	551	413
		G		12	3488	3662	3313	2999	2720	2406	2127	1848	1569	1395	1151	906	697	523
RAF 44C2	4"x4" x 1"	A	H		1475	1548	1401	1268	1150	1017	899	781	663	590	486	383	295	221
		B	J		1475	1548	1401	1268	1150	1017	899	781	663	590	486	383	295	221
		C			2454	2576	2331	2110	1914	1693	1496	1300	1104	981	809	638	490	368
	52 fins/ft	D	K	6	3001	3151	2850	2580	2340	2070	1830	1590	1350	1200	990	780	600	450
		E		6	3272	3435	3108	2813	2552	2257	1995	1734	1472	1308	1079	850	654	490
		G		12	4141	4348	3933	3561	3229	2857	2526	2194	1863	1656	1366	1076	828	621
RAF 34C2	3"x4" x 1"	A	H		1249	1311	1186	1074	974	861	761	661	562	499	412	324	249	187
		B	J		1249	1311	1186	1074	974	861	761	661	562	499	412	324	249	187
		C			2079	2182	1975	1787	1621	1434	1268	1101	935	831	686	540	415	311
	52 fins/ft	D	K	6	2542	2669	2414	2186	1982	1753	1550	1347	1143	1016	838	660	508	381
		E		6	2773	2911	2634	2384	2162	1913	1691	1469	1247	1109	915	720	554	415
		G		12	3509	3684	3333	3017	2737	2421	2140	1859	1579	1403	1157	912	701	526
RAF 44C3	4"x4" x 1-1/4"	A	H		1483	1557	1408	1275	1156	1023	904	785	667	593	489	385	296	222
		B	J		1483	1557	1408	1275	1156	1023	904	785	667	593	489	385	296	222
		C			2468	2591	2344	2122	1925	1702	1505	1308	1110	987	814	641	493	370
	48 fins/ft	D	K	6	3019	3169	2868	2596	2354	2083	1841	1600	1358	1207	996	784	603	452
		E		6	3291	3455	3126	2830	2566	2270	2007	1744	1480	1316	1086	855	658	493
		G		12	4166	4374	3957	3582	3249	2874	2541	2207	1874	1666	1374	1083	833	624
RAF 34C3	3"x4" x 1-1/4"	A	H		1255	1317	1192	1079	978	865	765	665	564	502	414	326	251	188
		B	J		1255	1317	1192	1079	978	865	765	665	564	502	414	326	251	188
		C			2091	2195	1986	1798	1630	1442	1275	1108	940	836	690	543	418	313
	48 fins/ft	D	K	6	2657	2789	2524	2285	2072	1833	1620	1408	1195	1062	876	690	531	398
		E		6	2789	2928	2649	2398	2175	1924	1701	1478	1255	1115	920	725	557	418
		G		12	3529	3705	3352	3034	2752	2435	2152	1870	1588	1411	1164	917	705	529
TYPE RSF				STEEL FINS / STEEL TUBE														
RSF 44S3	4"x4" x 1-1/4"	A	H		1228	1289	1166	1056	957	847	749	650	552	491	405	319	245	184
		B	J		1228	1289	1166	1056	957	847	749	650	552	491	405	319	245	184
		C			2029	2130	1927	1744	1582	1400	1237	1075	913	811	669	527	405	304
	48 fins/ft	D	K	6	2504	2629	2378	2153	1953	1727	1527	1327	1126	1001	826	651	500	375
		E		6	2724	2860	2587	2342	2124	1879	1661	1443	1225	1089	898	708	544	408
		G		12	3372	3540	3203	2899	2630	2326	2056	1787	1517	1348	1112	876	674	505

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



Technical drawing of a cabinet support system, showing dimensions and components. The drawing is a side elevation of a cabinet unit with two doors, mounted to a wall. The components and dimensions are as follows:

- Ceiling:** Indicated at the top of the drawing.
- 2 3/4":** Dimension for the width of the cabinet top.
- Min. 4":** Minimum clearance between the cabinet top and the ceiling.
- Cabinet Support IRC-5:** The support bracket for the cabinet top.
- 3 1/2":** Dimension for the height of the upper door.
- 3" ±:** Dimension for the height of the upper door frame.
- Element Support IRE-1:** The support bracket for the upper door.
- (6") [12"]:** Dimension for the height of the upper door frame.
- 12" (18") [24"]:** Dimension for the height of the lower door frame.
- Element Support RE-1:** The support bracket for the lower door.
- 6 7/8":** Dimension for the height of the lower door.
- Top Support:** The support bracket for the top of the cabinet unit.
- 1 5/8":** Dimension for the height of the bottom of the cabinet unit.
- 2 3/4":** Dimension for the width of the cabinet base.
- 5 1/4":** Dimension for the width of the cabinet base.
- Hanging Strip:** The strip at the bottom of the cabinet unit.
- Anchoring:** Indicated on the left side of the drawing.
- H:** Dimension for the total height of the cabinet unit.



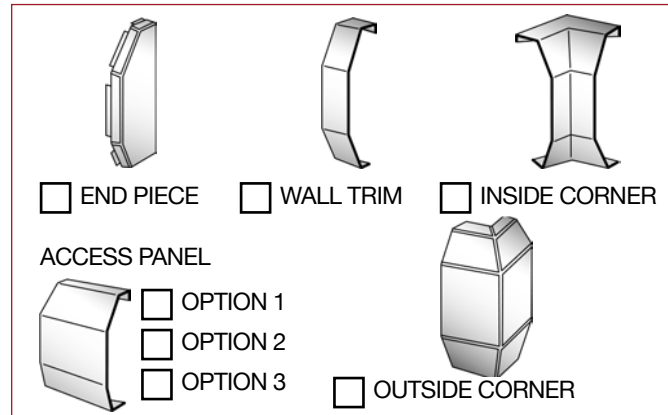
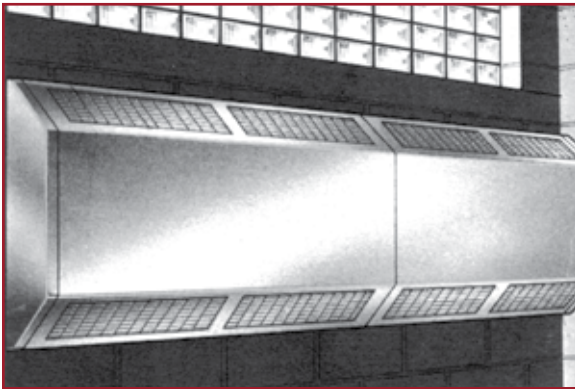
16

IRVS

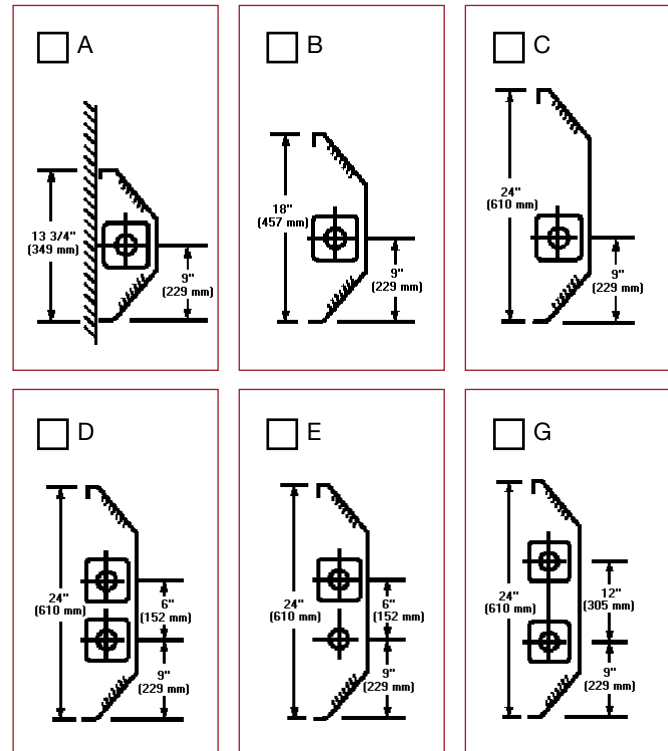
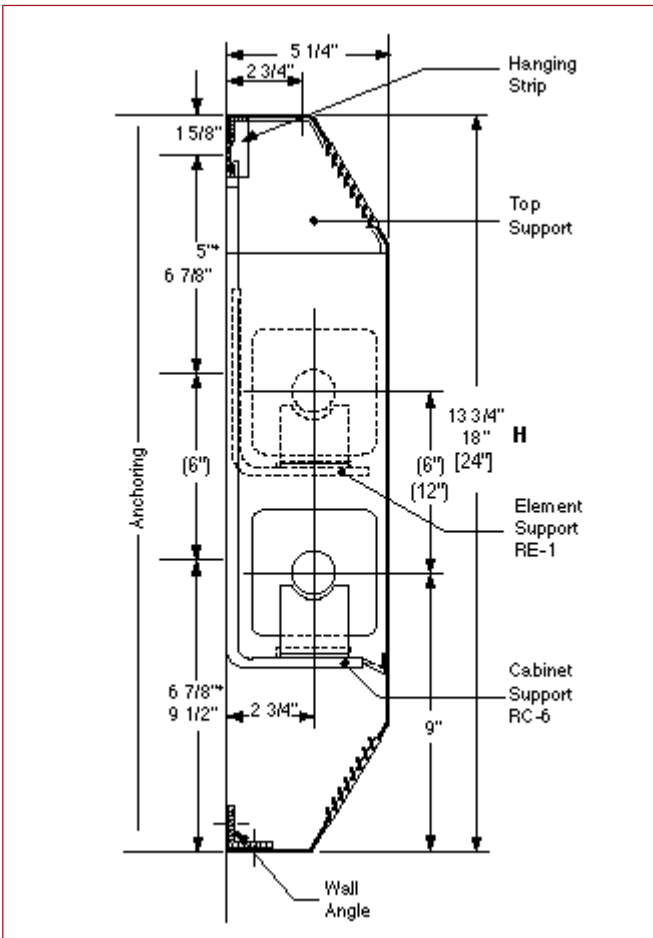
CAPACITIES

TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F												
						220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A	H		1284	1348	1219	1104	1001	885	783	680	577	513	423	333	256	192
		B	J		1421	1492	1349	1222	1108	980	866	753	639	568	468	369	284	213
		C			1483	1557	1408	1275	1156	1023	904	785	667	593	489	385	296	222
	52 fins/ft	D	K	6	1839	1930	1747	1581	1434	1268	1121	974	827	735	606	478	367	275
		E		6	1930	2026	1833	1659	1505	1331	1177	1022	868	772	636	501	386	289
		G		12	2223	2334	2111	1911	1733	1533	1356	1178	1000	889	733	577	444	333
RAF 34C1	3"x4" x 3/4"	A	H		1087	1141	1032	934	847	750	663	576	489	434	358	282	217	163
		B	J		1204	1264	1143	1035	939	830	734	638	541	481	397	313	240	180
		C			1256	1318	1193	1080	979	866	766	665	565	502	414	326	251	188
	52 fins/ft	D	K	6	1558	1635	1480	1339	1215	1075	950	825	701	623	514	405	311	233
		E		6	1635	1716	1553	1406	1275	1128	997	866	735	654	539	425	327	245
		G		12	1884	1978	1789	1620	1469	1299	1149	998	847	753	621	489	376	282
RAF 44C2	4"x4" x 1"	A	H		1291	1355	1226	1110	1006	890	787	684	580	516	426	335	258	193
		B	J		1430	1501	1358	1229	1115	986	872	757	643	572	471	371	286	214
		C			1492	1566	1417	1283	1163	1029	910	790	671	596	492	387	298	223
	52 fins/ft	D	K	6	1850	1942	1757	1591	1443	1276	1128	980	832	740	610	481	370	277
		E		6	1941	2038	1843	1669	1513	1339	1184	1028	873	776	640	504	388	291
		G		12	2236	2347	2124	1922	1744	1542	1363	1185	1006	894	737	581	447	335
RAF 34C2	3"x4" x 1"	A	H		1093	1147	1038	939	852	754	666	579	491	437	360	284	218	163
		B	J		1210	1270	1149	1040	943	834	738	641	544	484	399	314	242	181
		C			1263	1326	1199	1086	985	871	770	669	568	505	416	328	252	189
	52 fins/ft	D	K	6	1567	1645	1488	1347	1222	1081	955	830	705	626	517	407	313	235
		E		6	1645	1727	1562	1414	1283	1135	1003	871	740	658	542	427	329	246
		G		12	1895	1989	1800	1629	1478	1307	1155	1004	852	758	625	492	379	284
RAF 44C3	4"x4" x 1-1/4"	A	H		1299	1363	1234	1117	1013	896	792	688	584	519	428	337	259	194
		B	J		1438	1509	1366	1236	1121	992	877	762	647	575	474	373	287	215
		C			1500	1575	1425	1290	1170	1035	915	795	675	600	495	390	300	225
	48 fins/ft	D	K	6	1861	1954	1767	1600	1451	1284	1135	986	837	744	614	483	372	279
		E		6	1952	2049	1854	1678	1522	1346	1190	1034	878	780	644	507	390	292
		G		12	2248	2360	2135	1933	1753	1551	1371	1191	1011	899	741	584	449	337
RAF 34C3	3"x4" x 1-1/4"	A	H		1099	1153	1044	945	857	758	670	582	494	439	362	285	219	164
		B	J		1217	1277	1156	1046	949	839	742	645	547	486	401	316	243	182
		C			1270	1333	1206	1092	990	876	774	673	571	508	419	330	254	190
	48 fins/ft	D	K	6	1576	1654	1497	1355	1229	1087	961	835	709	630	520	409	315	236
		E		6	1654	1736	1571	1422	1290	1141	1008	876	744	661	545	430	330	248
		G		12	1906	2001	1810	1639	1486	1315	1162	1010	857	762	628	495	381	285
TYPE RSF				STEEL FINS / STEEL TUBE														
RSF 44S3	4"x4" x 1-1/4"	A	H		1071	1124	1017	921	835	738	653	567	481	428	353	278	214	160
		B	J		1176	1234	1117	1011	917	811	717	623	529	470	388	305	235	176
		C			1243	1305	1180	1068	969	857	758	658	559	497	410	323	248	186
	48 fins/ft	D	K	6	1647	1729	1564	1416	1284	1136	1004	872	741	658	543	428	329	247
		E		6	1735	1821	1648	1492	1353	1197	1058	919	780	694	572	451	347	260
		G		12	1918	2013	1822	1649	1496	1323	1169	1016	863	767	632	498	383	287

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



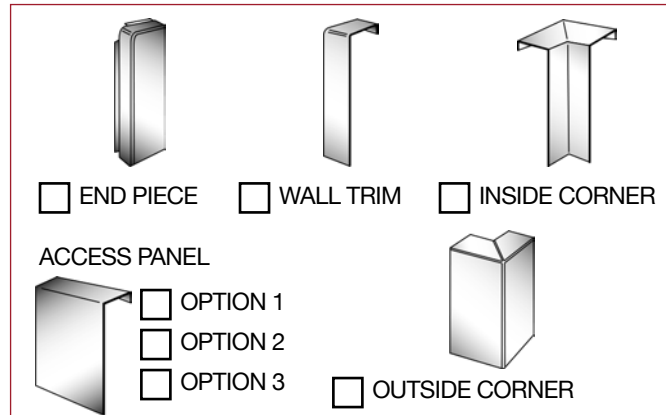
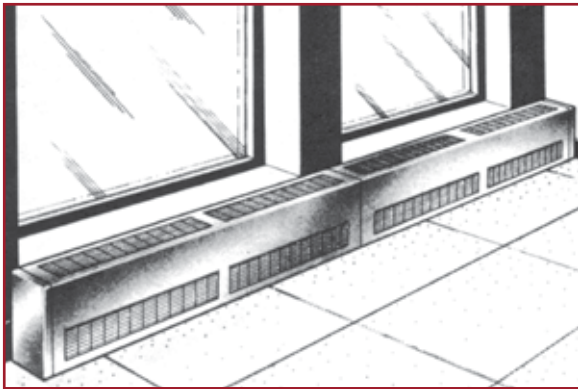
ARRANGEMENTS



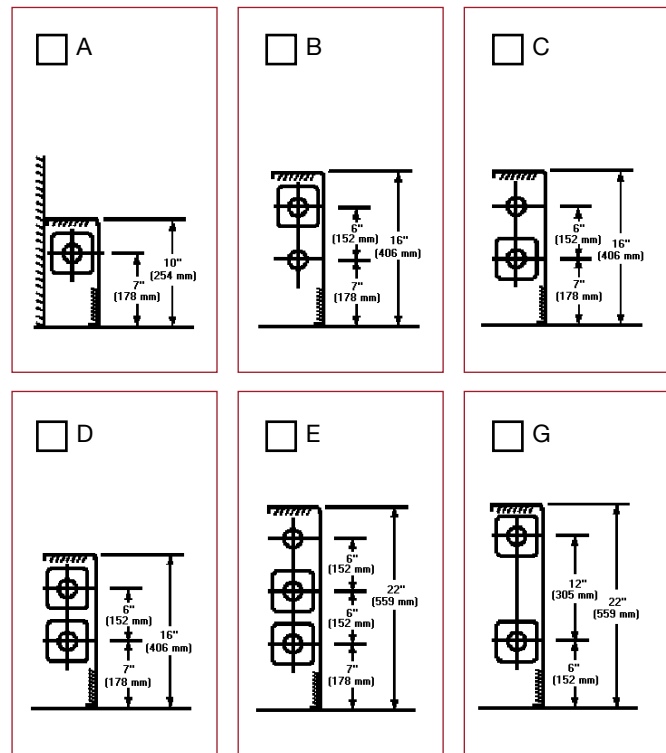
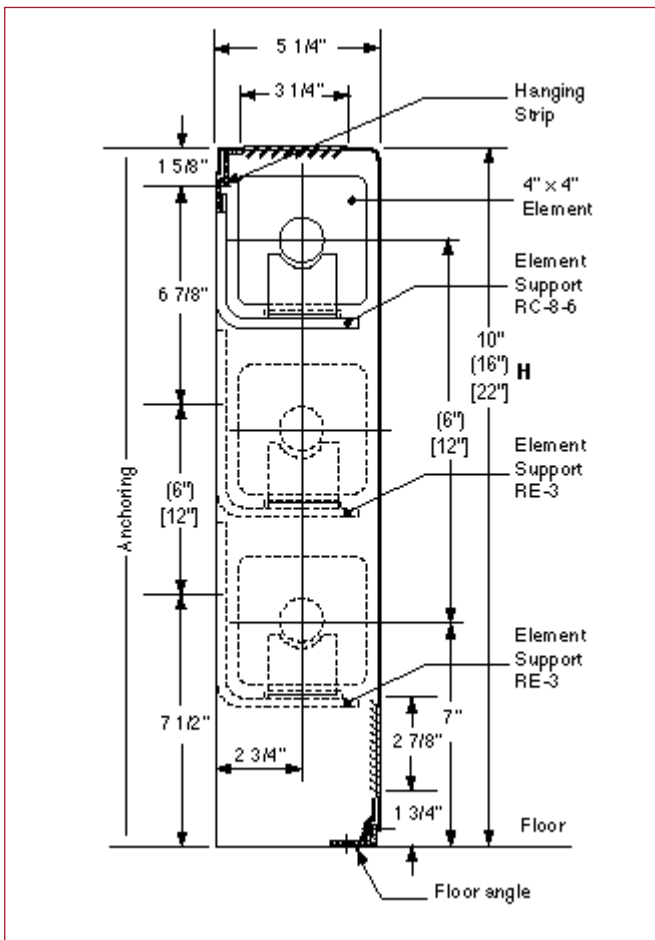
* Special dimensions for 13 3/4" high cabinet.

TYPE RAF					ALUMINUM FINS / COPPER TUBE													
ELEMENT		ARRANGEMENTS		ELEMENTS C/C (INCHES)	BTU/HR/LIN. FT. 65°F ENT. AIR													
NO.	DIM.				STEAM 1 PSIG	AVERAGE WATER TEMP. °F												
						220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A			1321	1387	1254	1136	1030	911	805	700	594	528	435	343	264	198
		B	E		1421	1492	1349	1222	1108	980	866	753	639	568	468	369	284	213
		C			1596	1675	1516	1372	1244	1101	973	845	718	638	526	414	319	239
	52 fins/ft	D		6	2071	2174	1967	1781	1615	1428	1263	1097	931	828	683	538	414	310
		G		12	2709	2844	2573	2329	2113	1869	1652	1435	1219	1083	893	704	541	406
RAF 34C1	3"x4" x 3/4"	A			1119	1174	1063	962	872	772	682	593	503	447	369	290	223	167
		B	E		1204	1264	1143	1035	939	830	734	638	541	481	397	313	240	180
		C			1352	1419	1284	1162	1054	932	824	716	608	540	446	351	270	202
	52 fins/ft	D		6	1754	1841	1666	1508	1368	1210	1069	929	789	701	578	456	350	263
		G		12	2295	2409	2180	1973	1790	1583	1399	1216	1032	918	757	596	459	344
RAF 44C2	4"x4" x 1"	A			1329	1395	1262	1142	1036	917	810	704	598	531	438	345	265	199
		B	E		1430	1501	1358	1229	1115	986	872	757	643	572	471	371	286	214
		C			1606	1686	1525	1381	1252	1108	979	851	722	642	529	417	321	240
	52 fins/ft	D		6	2083	2187	1978	1791	1624	1437	1270	1103	937	833	687	541	416	312
		G		12	2725	2861	2588	2343	2125	1880	1662	1444	1226	1090	899	708	545	408
RAF 34C2	3"x4" x 1"	A			1125	1181	1068	967	877	776	686	596	506	450	371	292	225	168
		B	E		1210	1270	1149	1040	943	834	738	641	544	484	399	314	242	181
		C			1360	1428	1292	1169	1060	938	829	720	612	544	448	353	272	204
	52 fins/ft	D		6	1765	1853	1676	1517	1376	1217	1076	935	794	706	582	458	353	264
		G		12	2309	2424	2193	1985	1801	1593	1408	1223	1039	923	761	600	461	346
RAF 44C3	4"x4" x 1-1/4"	A			1337	1403	1270	1149	1042	922	815	708	601	534	441	347	267	200
		B	E		1438	1509	1366	1236	1121	992	877	762	647	575	474	373	287	215
		C			1615	1695	1534	1388	1259	1114	985	855	726	646	532	419	323	242
	48 fins/ft	D		6	2094	2198	1989	1800	1633	1444	1277	1109	942	837	691	544	418	314
		G		12	2741	2878	2603	2357	2137	1891	1672	1452	1233	1096	904	712	548	411
RAF 34C3	3"x4" x 1-1/4"	A			1131	1187	1074	972	882	780	689	599	508	452	373	294	226	169
		B	E		1217	1277	1156	1046	949	839	742	645	547	486	401	316	243	182
		C			1368	1436	1299	1176	1067	943	834	725	615	547	451	355	273	205
	48 fins/ft	D		6	1775	1863	1686	1526	1384	1224	1082	940	798	710	585	461	355	266
		G		12	2322	2438	2205	1996	1811	1602	1416	1230	1044	928	766	603	464	348
TYPE RSF																		
STEEL FINS / STEEL TUBE																		
RSF 44S3	4"x4" x 1-1/4"	A			1078	1131	1024	927	840	743	657	571	485	431	355	280	215	161
		B	E		1160	1218	1102	997	904	800	707	614	522	464	382	301	232	174
		C			1288	1352	1223	1107	1004	888	785	682	579	515	425	334	257	193
	48 fins/ft	D		6	1799	1888	1709	1547	1403	1241	1097	953	809	719	593	467	359	269
		G		12	2156	2263	2048	1854	1681	1487	1315	1142	970	862	711	560	431	323

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



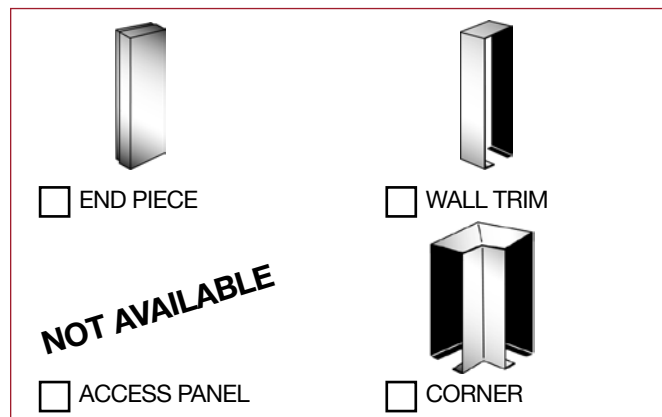
ARRANGEMENTS



RVP CAPACITIES

TYPE RAF			ALUMINUM FINS / COPPER TUBE															
ELEMENT		ARRANGE- MENTS	ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT														
NO.	DIM.			STEAM 1 PSIG	AVERAGE WATER TEMPERATURE °F													
					220	210	200	190	180	170	160	150	140	130	120	110	100	
RAF 44C1	4"x4" x 3/4"	A		1281	1345	1216	1101	999	883	781	678	576	512	422	333	256	192	
		B		1281	1345	1216	1101	999	883	781	678	576	512	422	333	256	192	
		C		1409	1479	1338	1211	1099	972	859	746	634	563	464	366	281	211	
	52 fins/ft	D	6	1866	1959	1772	1604	1455	1287	1138	988	839	746	615	485	373	279	
		E	6	2033	2134	1931	1748	1585	1402	1240	1077	914	813	670	528	406	304	
		G	12	2277	2390	2163	1958	1776	1571	1388	1206	1024	910	751	592	455	341	
RAF 34C1	3"x4" x 3/4"	A		1085	1139	1030	933	846	748	661	575	488	434	358	282	217	162	
		B		1085	1139	1030	933	846	748	661	575	488	434	358	282	217	162	
		C		1194	1253	1134	1026	931	823	728	632	537	477	394	310	238	179	
	52 fins/ft	D	6	1581	1660	1501	1359	1233	1090	964	837	711	632	521	411	316	237	
		E	6	1724	1810	1637	1482	1344	1189	1051	913	775	689	568	448	344	258	
		G	12	1930	2026	1833	1659	1505	1331	1177	1022	868	772	636	501	386	289	
RAF 44C2	4"x4" x 1"	A		1289	1353	1224	1108	1005	889	786	683	580	515	425	335	257	193	
		B		1289	1353	1224	1108	1005	889	786	683	580	515	425	335	257	193	
		C		1417	1487	1346	1218	1105	977	864	751	637	566	467	368	283	212	
	52 fins/ft	D	6	1877	1970	1783	1614	1464	1295	1144	994	844	750	619	488	375	281	
		E	6	2045	2147	1942	1758	1595	1411	1247	1083	920	818	674	531	409	306	
		G	12	2291	2405	2176	1970	1786	1580	1397	1214	1030	916	756	595	458	343	
RAF 34C2	3"x4" x 1"	A		1091	1145	1036	938	850	752	665	578	490	436	360	283	218	163	
		B		1091	1145	1036	938	850	752	665	578	490	436	360	283	218	163	
		C		1201	1261	1140	1032	936	828	732	636	540	480	396	312	240	180	
	52 fins/ft	D	6	1590	1669	1510	1367	1240	1097	969	842	715	636	524	413	318	238	
		E	6	1734	1820	1647	1491	1352	1196	1057	919	780	693	572	450	346	260	
		G	12	1941	2038	1843	1669	1513	1339	1184	1028	873	776	640	504	388	291	
RAF 44C3	4"x4" x 1-1/4"	A		1296	1360	1231	1114	1010	894	790	686	583	518	427	336	259	194	
		B		1296	1360	1231	1114	1010	894	790	686	583	518	427	336	259	194	
		C		1425	1496	1353	1225	1111	983	869	755	641	570	470	370	285	213	
	48 fins/ft	D	6	1888	1982	1793	1623	1472	1302	1151	1000	849	755	623	490	377	283	
		E	6	2057	2159	1954	1769	1604	1419	1254	1090	925	822	678	534	411	308	
		G	12	2304	2419	2188	1981	1797	1589	1405	1221	1036	921	760	599	460	345	
RAF 34C3	3"x4" x 1-1/4"	A		1097	1151	1042	943	855	756	669	581	493	438	362	285	219	164	
		B		1097	1151	1042	943	855	756	669	581	493	438	362	285	219	164	
		C		1208	1268	1147	1038	942	833	736	640	543	483	398	314	241	181	
	48 fins/ft	D	6	1600	1680	1520	1376	1248	1104	976	848	720	640	528	416	320	240	
		E	6	1744	1831	1656	1499	1360	1203	1063	924	784	697	575	453	348	261	
		G	12	1952	2049	1854	1678	1522	1346	1190	1034	878	780	644	507	390	292	
TYPE RSF			STEEL FINS / STEEL TUBE															
RSF 44S3	4"x4" x 1-1/4"	A		1060	1113	1007	911	826	731	646	561	477	424	349	275	212	159	
		B		1060	1113	1007	911	826	731	646	561	477	424	349	275	212	159	
		C		1166	1224	1107	1002	909	804	711	617	524	466	384	303	233	174	
	48 fins/ft	D	6	1544	1621	1466	1327	1204	1065	941	818	694	617	509	401	308	231	
		E	6	1683	1767	1598	1447	1312	1161	1026	891	757	673	555	437	336	252	
		G	12	1885	1979	1790	1621	1470	1300	1149	999	848	754	622	490	377	282	

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



5 3/4"

3 5/8"

6"

7'

4"

4"

Element Support RE-1 Spc

Element Support RE-1 Spc

Link complete with nuts

Cabinet & Element Support

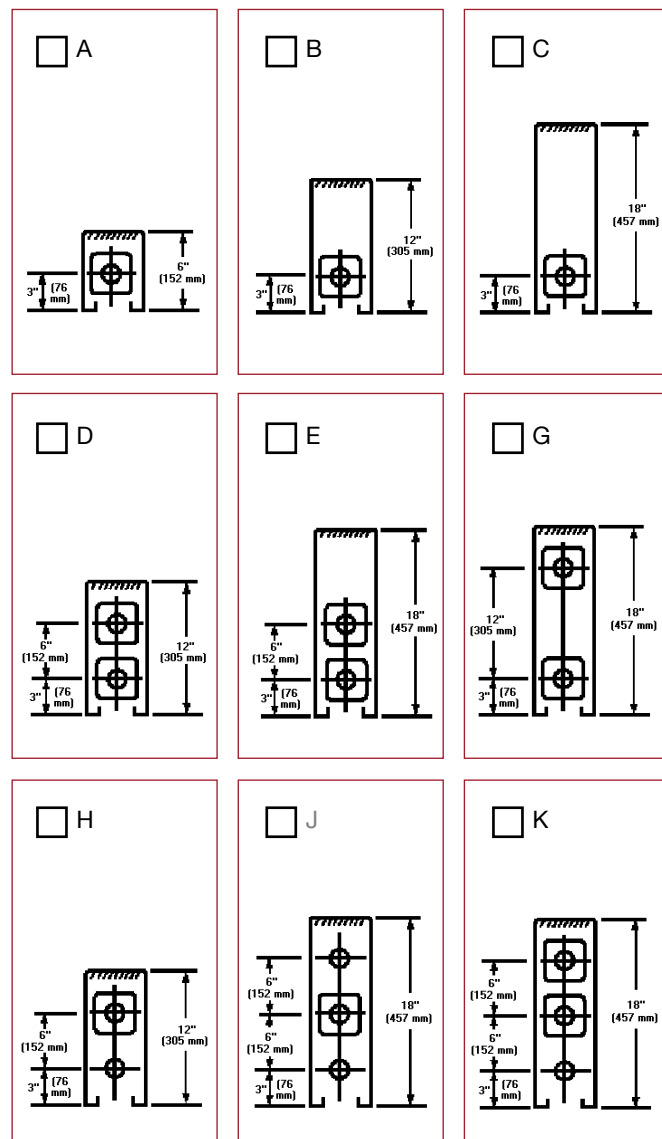
Floor

Adjustable Cabinet Pedestal

(6") [12"]

(12") [18"]

4" ±

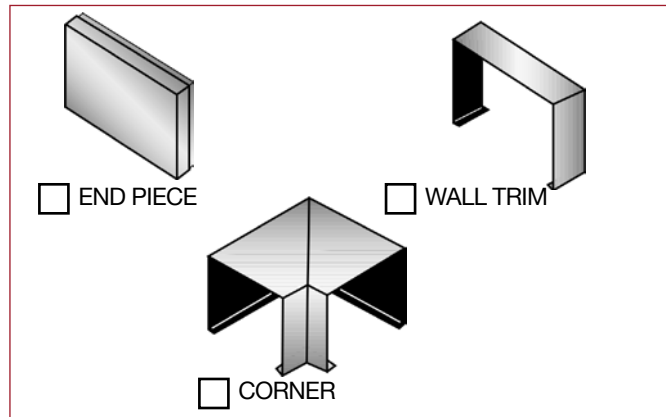
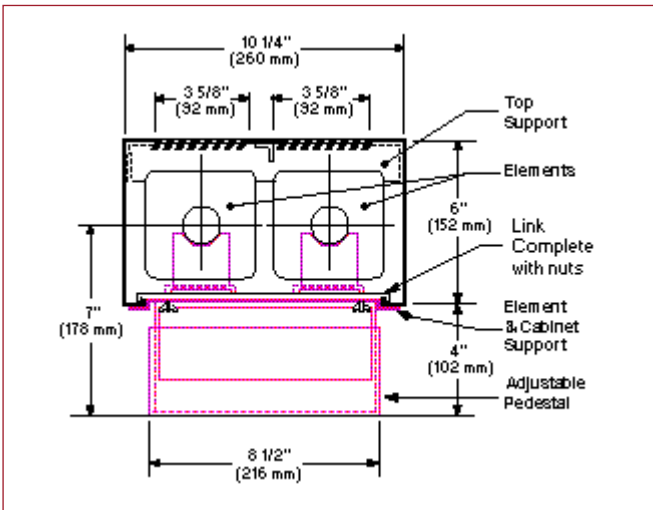
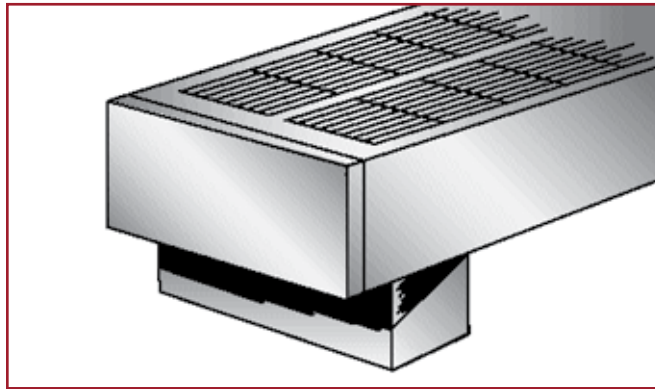


RVCES CAPACITIES



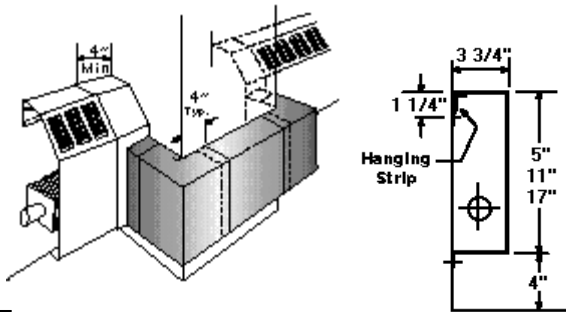
TYPE RAF				ALUMINUM FINS / COPPER TUBE														
ELEMENT		ARRANGE- MENTS		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.				AVERAGE WATER TEMPERATURE °F													
					STEAM 1 PSIG	220	210	200	190	180	170	160	150	140	130	120	110	100
RAF 44C1	4"x4" x 3/4"	A	H		1594	1673	1514	1370	1243	1099	972	844	717	637	526	414	318	239
		B	J		1805	1895	1714	1552	1407	1245	1101	956	812	722	595	469	361	270
		C			2028	2129	1926	1744	1581	1399	1237	1074	912	811	669	527	405	304
	52 fins/ft	D	K	6	2330	2446	2213	2003	1817	1607	1421	1234	1048	932	768	605	466	349
		E		6	2679	2812	2545	2303	2089	1848	1634	1419	1205	1071	884	696	535	401
		G		12	2984	3133	2834	2566	2327	2058	1820	1581	1342	1193	984	775	596	447
RAF 34C1	3"x4" x 3/4"	A	H		1350	1417	1282	1161	1053	931	823	715	607	540	445	351	270	202
		B	J		1530	1606	1453	1315	1193	1055	933	810	688	612	504	397	306	229
		C			1719	1804	1633	1478	1340	1186	1048	911	773	687	567	446	343	257
	52 fins/ft	D	K	6	1974	2072	1875	1697	1539	1362	1204	1046	888	789	651	513	394	296
		E		6	2270	2383	2156	1952	1770	1566	1384	1203	1021	908	749	590	454	340
		G		12	2528	2654	2401	2174	1971	1744	1542	1339	1137	1011	834	657	505	379
RAF 44C2	4"x4" x 1"	A	H		1603	1683	1522	1378	1250	1106	977	849	721	641	528	416	320	240
		B	J		1816	1906	1725	1561	1416	1253	1107	962	817	726	599	472	363	272
		C			2040	2142	1938	1754	1591	1407	1244	1081	918	816	673	530	408	306
	52 fins/ft	D	K	6	2343	2460	2225	2014	1827	1616	1429	1241	1054	937	773	609	468	351
		E		6	2695	2829	2560	2317	2102	1859	1643	1428	1212	1078	889	700	539	404
		G		12	3001	3151	2850	2580	2340	2070	1830	1590	1350	1200	990	780	600	450
RAF 34C2	3"x4" x 1"	A	H		1357	1424	1289	1167	1058	936	827	719	610	542	447	352	271	203
		B	J		1539	1615	1462	1323	1200	1061	938	815	692	615	507	400	307	230
		C			1729	1815	1642	1486	1348	1193	1054	916	778	691	570	449	345	259
	52 fins/ft	D	K	6	1985	2084	1885	1707	1548	1369	1210	1052	893	794	655	516	397	297
		E		6	2284	2398	2169	1964	1781	1575	1393	1210	1027	913	753	593	456	342
		G		12	2542	2669	2414	2186	1982	1753	1550	1347	1143	1016	838	660	508	381
RAF 44C3	4"x4" x 1-1/4"	A	H		1612	1692	1531	1386	1257	1112	983	854	725	644	531	419	322	241
		B	J		1826	1917	1734	1570	1424	1259	1113	967	821	730	602	474	365	273
		C			2052	2154	1949	1764	1600	1415	1251	1087	923	820	677	533	410	307
	48 fins/ft	D	K	6	2357	2474	2239	2027	1838	1626	1437	1249	1060	942	777	612	471	353
		E		6	2711	2846	2575	2331	2114	1870	1653	1436	1219	1084	894	704	542	406
		G		12	3019	3169	2868	2596	2354	2083	1841	1600	1358	1207	996	784	603	452
RAF 34C3	3"x4" x 1-1/4"	A	H		1365	1433	1296	1173	1064	941	832	723	614	546	450	354	273	204
		B	J		1547	1624	1469	1330	1206	1067	943	819	696	618	510	402	309	232
		C			1739	1825	1652	1495	1356	1199	1060	921	782	695	573	452	347	260
	48 fins/ft	D	K	6	1997	2096	1897	1717	1557	1377	1218	1058	898	798	659	519	399	299
		E		6	2298	2412	2183	1976	1792	1585	1401	1217	1034	919	758	597	459	344
		G		12	2557	2684	2429	2199	1994	1764	1559	1355	1150	1022	843	664	511	383
TYPE RSF																		
STEEL FINS / STEEL TUBE																		
RSF 44S3	4"x4" x 1-1/4"	A	H		1267	1330	1203	1089	988	874	772	671	570	506	418	329	253	190
		B	J		1413	1483	1342	1215	1102	974	861	748	635	565	466	367	282	211
		C			1539	1615	1462	1323	1200	1061	938	815	692	615	507	400	307	230
	48 fins/ft	D	K	6	1799	1888	1709	1547	1403	1241	1097	953	809	719	593	467	359	269
		E		6	2067	2170	1963	1777	1612	1426	1260	1095	930	826	682	537	413	310
		G		12	2519	2644	2393	2166	1964	1738	1536	1335	1133	1007	831	654	503	377

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



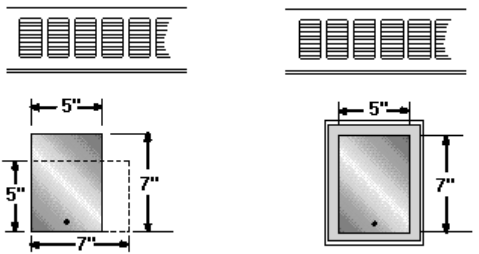
TYPE RAF		ALUMINUM FINS / COPPER TUBE														
ELEMENT		ELEMENTS C.C. (INCHES)	BTU/HR/FT AT 65°F EAT													
NO.	DIM.		STEAM 1 PSIG	AVERAGE WATER TEMP. °F												
				220	210	200	190	180	170	160	150	140	130	120	110	100
44C1	4"x4" x 3/4" 52 fins/ft	4 5/8	3123	3279	2966	2685	2435	2154	1905	1655	1405	1249	1030	811	624	468
34C1	3"x4" x 3/4" 52 fins/ft	4 5/8	2602	2732	2471	2237	2029	1795	1587	1379	1170	1040	858	676	520	390
44C2	4"x4" x 1" 52 fins/ft	4 5/8	3141	3298	2983	2701	2449	2167	1916	1664	1413	1256	1036	816	628	471
34C2	3"x4" x 1" 52 fins/ft	4 5/8	2617	2747	2486	2250	2041	1805	1596	1387	1177	1046	863	680	523	392
44C3	4"x4" x 1-1/4" 52 fins/ft	4 5/8	3159	3316	3001	2716	2464	2179	1926	1674	1421	1263	1042	821	631	473
34C3	3"x4" x 1-1/4" 52 fins/ft	4 5/8	2632	2763	2500	2263	2052	1816	1605	1394	1184	1052	868	684	526	394
TYPE RSF		STEEL FINS / STEEL TUBE														
44S3	4"x4" x 1-1/4" 48 fins/ft	4 5/8	2371	2489	2252	2039	1849	1635	1446	1256	1066	948	782	616	474	355

Note: Water ratings have been determined by applying the IBR factors shown to the steam ratings and apply only when the water velocity is 3 ft/s.



☐ PILASTER COVER

Pilaster covers are available in 5", 11" and 17" heights. Each consists of two outside corners and three dummy cabinets to suit predetermined dimensions.



ACCESS DOORS

☐ FACTORY MOUNTED

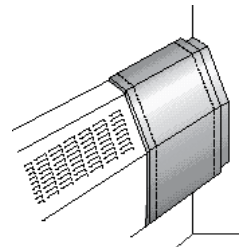
Access doors are used for access to valves or controls located inside enclosure. Latch catches are furnished as standard. Doors with allenhead camlock fasteners are also available.

☐ FIELD MOUNTED

Available immediately from stock in both latch catch and camlock fastener types. Enclosure opening for field mounted access door is perforated on jobsite by contractor. Framed access door is supplied by factory and is installed over opening.

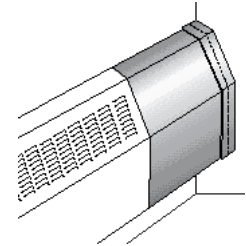
☐ ACCESS PANEL (overlapping) OPTION 1

- Supplied with an underlap wall angle filler piece.
- Available in 12, 18 and 24 inch long.
- Also available with welded end cap and rounded corners.



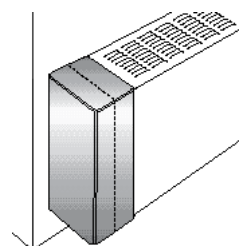
☐ ACCESS PANEL (butt-joint) OPTION 2

- Supplied with an overlapping filler piece and one additional cabinet support.
- Available in 12, 18 and 24 inch long.
- Highly recommended when delivery is urgent, and field measurements are not available.
- Access panel can be cut on wall side and covered with the overlap supplied joiner [2 inch wide].
- Also available with welded end cap.



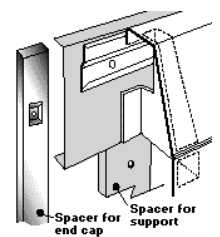
☐ END PIECE (overlapping) OPTION 4

- Permits installer to maintain a pre-determined measurement from adjoining wall.
- Available in 4, 5, 6, 8 inch wide.



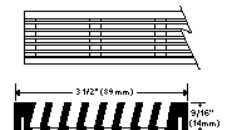
☐ SPACERS OPTION 5

- For use in areas where panels are subject to frequent removal.
- Prevents scratching of wall.
- Recommended for hospital use for ease of maintenance.
- Channel dimension: 3/8" x 5" x 96" long.
- Cabinet hanging strip is spot welded to extended hanging channel.



☐ EXTRUDED ALUMINUM GRILLE OPTION 6 (# EAG - 3500)

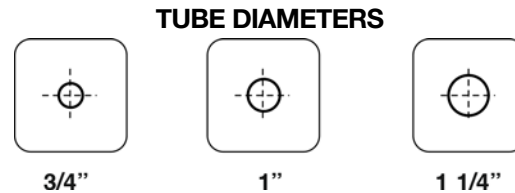
- Instead of outlet punched louver.



ADVANTAGES OF SMALL TUBE SIZING

1. SYSTEM DESIGNING FLEXIBILITY (COPPER TUBE ONLY)

The different tube sizes shown in our catalogue enables a designer to select a size for different applications which allows him to balance his system and reduce problems of balancing after installation. Just as distribution piping is sized in accordance with the load, so can a fin-tube run be sized in accordance with the load, within the limits of available tube size.



2. HIGHER WATER VELOCITY

Where low flow rates occur, the smaller tube sizes can be used effectively to avoid the low "critical" velocity range. The Institute of Boiler and Radiator Manufacturers sponsored a test program at the University of Illinois to determine the effect of water velocity on heat output of various sizes in fin-tube elements. Fig. 1 is a plot of the results of this program showing rating factors versus velocity. The 1969 Equipment Volume of ASHRAE Guide and data Book points out on page 393 that the rating factor drops rapidly between 0.4 and 0.25 Ft/Sec. water velocity where flow changes from turbulent to streamline flow, and VELOCITIES BELOW THIS RANGE SHOULD BE AVOIDED in a hot water heating system, since the results cannot be accurately predictable. From table 1 it is apparent that the rating factor drops even more rapidly with water velocity below 0.25 Ft / Sec. thus seriously affecting the heat output of the fin-tube unit. It is therefore recommended that the designer check the velocity on lowload units and select the heating element tube size that will provide a velocity above the "critical" range. If the velocity should be too low, even the smallest available tube size, the design water flow rate should be increased to that unit.

3. HIGHER TEMPERATURE DROP POSSIBLE

Where optimum system design dictates a temperature drop higher than the "standard 20° T.D.", the attendant lower flow rate may require a small tube size to provide a desirable velocity.

EXAMPLE: Using the relation $G.P.M. = \frac{B.T.U.}{500 \times T.D.}$

and assuming a fin-tube run with a connected load of 20,000 B.T.U., the flow rate would be 2 G.P.M. based on a 20° T.D. The velocity through a 1 1/4" copper fin-tube would be 0.55 Ft / Sec. (from Fig. 1) which is above the "critical" velocity of 0.25 Ft / Sec. Should it be desired to use a 40° T.D., however, the flow rate would be 1 G.P.M. and the velocity would be close to the "critical". In this case a 1" or preferably a 3/4" copper fin-tube heating element would provide a "safe" velocity thus making a 40° T.D. feasible.

4. HEAT RECOVERY OR TOTAL ENERGY SYSTEM

Where perimeter fin-tube heating is used on systems having very low water temperatures, the low heat transfer rate may require a large size fin to offset heat losses and at the same time may require a small size tube because of the small total load.

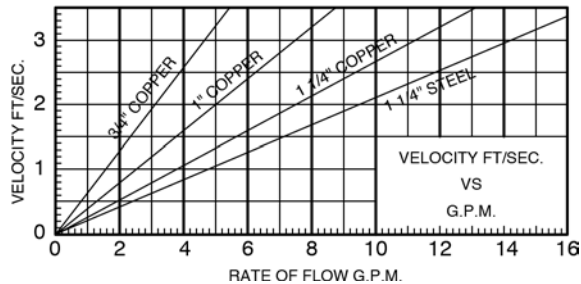
5. ECONOMICAL

Use of the small tube sizes result in lower cost for connecting piping in a run, for valves, expansion joints, fittings, etc., as well as lower heating element cost; and when used to balance resistances on the various run, distribution piping and pump sizes are not affected.

WATER VELOCITY CORRECTION FACTORS

The curves in Fig. 1 can be used to check water velocity in heating element tubing. A minimum velocity of 0.25 Ft / Sec. is recommended to ensure turbulent flow of water. Heating elements are catalogued with three different copper tube sizes (3/4", 1", 1 1/4") for a broader range of selection. Note that 3/4" tube elements can be used with flow rates as low as 0.4 G.P.M.

FIG. 1



CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES AND ENTERING AIR TEMPERATURES OTHER THAN STANDARD

To correct for water or air temperatures other than standard, multiply the catalog BTU steam rating (215° Av. W.T., 65° E.A.T.) by the factor obtained from TABLE 2. NOTE: The factors in TABLE 2 are not equal to, but approximate, factors for saturated steam temperatures and entering air temperatures shown in TABLE 3.

TABLE 1

WATER VELOCITY FT./SEC.	IBR CONNECTION FACTORS
0.20	Laminar Flow
0.25	0.905
0.50	0.931
1.00	0.957
1.50	0.973
2.00	0.984
2.50	0.992
3.00 or more	1.000

TABLE 2

AVG. WATER TEMPERATURE °F	ENTERING AIR TEMPERATURE °F									
	45	50	55	60	65	68	70	75	80	85
150	0.61	0.57	0.53	0.49	0.45	0.43	0.42	0.38	0.34	0.31
160	0.69	0.65	0.61	0.57	0.53	0.51	0.49	0.45	0.42	0.38
170	0.82	0.77	0.72	0.67	0.61	0.59	0.57	0.53	0.48	0.44
180	0.91	0.86	0.81	0.75	0.69	0.67	0.65	0.61	0.56	0.52
190	1.00	0.94	0.89	0.84	0.78	0.75	0.73	0.69	0.64	0.60
200	1.09	1.03	0.97	0.92	0.86	0.83	0.81	0.77	0.72	0.68
210	1.18	1.12	1.06	1.01	0.95	0.92	0.90	0.85	0.80	0.76
215	1.22	1.16	1.10	1.05	1.00	0.97	0.94	0.89	0.84	0.80
220	1.27	1.21	1.15	1.09	1.04	1.01	0.98	0.93	0.88	0.84
230	1.37	1.30	1.24	1.19	1.14	1.11	1.08	1.03	0.98	0.93
240	1.47	1.41	1.35	1.26	1.24	1.20	1.17	1.12	1.07	1.02
250	1.57	1.50	1.44	1.38	1.32	1.29	1.26	1.20	1.15	1.10

CORRECTION FACTORS FOR STEAM PRESSURE AND AIR TEMPERATURES OTHER THAN STANDARD

TABLE 3

STEAM PRESSURE		TEMP. °F	ENTERING AIR TEMPERATURE °F															
GAGE T	ABS. PSI.		45	55	65	68	70	75	80	85	90	100	110	120	130	140	150	
(Vac) 15" Hg	7.32	178.9	0.90	0.80	0.70	0.67	0.65	0.60	0.56	0.51	0.45	0.39	0.32	0.25	0.18	0.13	0.08	
(Vac) 10" Hg	9.78	192.2	1.02	0.91	0.81	0.78	0.76	0.71	0.66	0.62	0.55	0.48	0.40	0.33	0.26	0.20	0.14	
(Vac) 5" Hg	12.25	202.9	1.11	1.00	0.90	0.87	0.85	0.79	0.75	0.70	0.63	0.56	0.48	0.40	0.33	0.27	0.20	
0 PSI	14.696	212.0	1.19	1.09	0.97	0.94	0.92	0.87	0.82	0.77	0.70	0.63	0.54	0.46	0.38	0.31	0.25	
0.899	15.595	215.0	1.22	1.11	1.00	0.97	0.95	0.90	0.84	0.80	0.75	0.65	0.57	0.48	0.40	0.33	0.26	
5	19.70	227.1	1.34	1.22	1.11	1.08	1.05	1.00	0.95	0.90	0.81	0.75	0.66	0.57	0.49	0.41	0.34	
10	24.70	239.4	1.45	1.33	1.22	1.19	1.17	1.11	1.05	1.00	0.91	0.85	0.75	0.66	0.58	0.50	0.42	
15	29.70	249.8	1.55	1.43	1.31	1.28	1.26	1.20	1.14	1.09	1.00	0.94	0.84	0.75	0.66	0.57	0.49	
20	34.70	258.8	1.63	1.52	1.40	1.36	1.33	1.28	1.23	1.17	1.07	1.02	0.92	0.82	0.73	0.64	0.55	
25	39.70	266.8	1.71	1.59	1.47	1.44	1.41	1.36	1.30	1.25	1.15	1.09	0.98	0.89	0.80	0.71	0.62	
30	44.70	274.0	1.78	1.66	1.54	1.51	1.48	1.42	1.37	1.31	1.21	1.15	1.05	0.95	0.85	0.76	0.68	
40	54.70	286.7	1.91	1.79	1.66	1.63	1.61	1.54	1.49	1.43	1.32	1.27	1.16	1.06	0.97	0.87	0.78	

EXPANSION

Elements - The saddle supporting the heating elements allows a maximum travel of 1 5/8" for expansion and contraction.

Enclosure - The extruded aluminum grille expands approximately 0.1" per 8' enclosure length when heat is applied under normal conditions. End enclosures, where used, will expand with the enclosure. On wall to wall application, the enclosure will expand under the overlapping end piece. On long runs of 50' to 100' or over, enclosure joints at center of run, or at specified intervals could be spread and covered with an end piece instead of taking up expansion only at end of run.

