



Air comfort for all



**EXTENDED
RATINGS**

Indoor Unit

MODELS:

4LIV09HP115V1AH
4LIV12HP115V1AH

4LIV09HP230V1AH
4LIV12HP230V1AH
4LIV18HP230V1AH
4LIV24HP230V1AH
4LIV30HP230V1AH
4LIV36HP230V1AH

Outdoor Unit

MODELS:

4LIV09HP115V1AO
4LIV12HP115V1AO

4LIV09HP230V1AO
4LIV12HP230V1AO
4LIV18HP230V1AO
4LIV24HP230V1AO
4LIV30HP230V1AO
4LIV36HP230V1AO

Thank you for choosing our product.
Please go through this Extended Ratings to design
your project and retain it for future reference.

To download an electric version visit
<https://www.greecomfort.com/system-documentation/>

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F																				
	0°F	7150	5237	73%	8.1	883	7590	5560	73%	8.2	930	7810	5721	73%	8.0	979	8470	6204	73%	7.8	1079
	5°F	7260	5336	74%	8.1	902	7700	5660	74%	8.1	949	7920	5821	74%	7.9	999	8580	6306	74%	7.8	1101
	10°F	7425	5476	74%	8.1	920	7865	5800	74%	8.1	968	8085	5963	74%	7.9	1019	8745	6449	74%	7.8	1124
	15°F	7590	5617	74%	8.1	938	8030	5942	74%	8.1	988	8250	6105	74%	7.9	1040	8910	6593	74%	7.8	1146
	20°F	7700	5717	74%	8.1	956	8140	6044	74%	8.1	1007	8360	6207	74%	7.9	1060	9020	6697	74%	7.7	1168
	25°F	7810	5818	75%	8.0	975	8250	6146	75%	8.0	1026	8470	6310	75%	7.8	1080	9130	6802	75%	7.7	1191
	30°F	8085	6044	75%	8.1	993	8525	6372	75%	8.2	1045	8745	6537	75%	7.9	1100	9405	7030	75%	7.8	1213
	35°F	8360	6270	75%	8.3	1011	8800	6600	75%	8.3	1064	9020	6765	75%	8.0	1121	9680	7260	75%	7.8	1235
	40°F	8525	6415	75%	8.3	1030	8965	6746	75%	8.3	1084	9185	6912	75%	8.1	1141	9845	7408	75%	7.8	1258
	45°F	8690	6561	76%	8.3	1048	9130	6893	76%	8.3	1103	9350	7059	76%	8.1	1161	10010	7558	76%	7.8	1280
	50°F	8965	6791	76%	8.4	1066	9405	7124	76%	8.4	1122	9625	7291	76%	8.1	1181	10285	7791	76%	7.9	1302
	55°F	9240	7022	76%	8.5	1084	9680	7357	76%	8.5	1141	9900	7524	76%	8.2	1202	10560	8026	76%	8.0	1325
	60°F	9515	7255	76%	8.6	1103	9955	7591	76%	8.6	1161	10175	7758	76%	8.3	1222	10835	8262	76%	8.0	1347
	65°F	9790	7489	77%	8.7	1121	10230	7826	77%	8.7	1180	10450	7994	77%	8.4	1242	11110	8499	77%	8.1	1369
	70°F	10230	7852	77%	9.0	1139	10670	8189	77%	8.9	1199	10890	8358	77%	8.6	1262	11550	8865	77%	8.3	1392
	75°F	10670	8216	77%	9.2	1157	11110	8555	77%	9.1	1218	11330	8724	77%	8.8	1283	11990	9232	77%	8.5	1414
	80°F	10835	8370	77%	9.2	1176	11275	8710	77%	9.1	1238	11495	8880	77%	8.8	1303	12155	9390	77%	8.5	1436
85°F	11000	8525	78%	9.2	1194	11440	8866	78%	9.1	1257	11660	9037	78%	8.8	1323	12320	9548	78%	8.4	1459	
90°F	10670	8296	78%	8.8	1206	11110	8638	78%	8.8	1270	11330	8809	78%	8.5	1337	11990	9322	78%	8.1	1473	
95°F	10340	8065	78%	8.5	1218	10780	8408	78%	8.4	1283	11000	8580	78%	8.1	1350	11660	9095	78%	7.8	1488	
100°F	10065	7876	78%	8.1	1249	10505	8220	78%	8.0	1315	10725	8392	78%	7.8	1384	11385	8909	78%	7.5	1526	
105°F	9790	7685	79%	7.7	1279	10230	8031	79%	7.6	1347	10450	8203	79%	7.4	1418	11110	8721	79%	7.1	1563	
110°F	9625	7580	79%	7.3	1310	10065	7926	79%	7.3	1379	10285	8099	79%	7.1	1451	10945	8619	79%	6.8	1600	
115°F	9460	7473	79%	7.1	1340	9900	7821	79%	7.0	1411	10120	7995	79%	6.8	1485	10780	8516	79%	6.6	1637	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV09HP115V1AH / 4LIV09HP115V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature			Return Air Temperature											
			70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)		
			TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	7540	1.90	1161	7280	1.80	1184	7020	1.70	1208	6760	1.61	1232
	-10°F	-11°F	7995	2.00	1173	7735	1.89	1196	7475	1.80	1220	7215	1.70	1245
	-5°F	-6°F	8450	2.09	1185	8190	1.99	1208	7930	1.89	1233	7670	1.79	1257
	0°F	-1°F	8840	2.14	1209	8580	2.04	1233	8320	1.94	1258	8060	1.84	1283
	5°F	3°F	9230	2.19	1234	8970	2.09	1258	8710	1.99	1283	8450	1.89	1309
	10°F	8°F	9750	2.27	1259	9490	2.17	1284	9230	2.07	1310	8970	1.97	1336
	15°F	13°F	9945	2.29	1272	9945	2.25	1297	9685	2.15	1323	9425	2.05	1349
	17°F	15°F	10140	2.31	1284	10400	2.33	1310	10140	2.22	1336	9880	2.12	1363
	20°F	17°F	10660	2.38	1311	10400	2.28	1337	10140	2.18	1364	9880	2.08	1391
	25°F	22°F	11050	2.42	1337	10790	2.32	1364	10530	2.22	1391	10270	2.12	1419
	30°F	27°F	11245	2.44	1351	10985	2.34	1378	10725	2.24	1406	10465	2.14	1434
	35°F	33°F	11440	2.46	1365	11180	2.35	1392	10920	2.25	1420	10660	2.16	1448
	40°F	36°F	12350	2.60	1393	12090	2.49	1420	11830	2.39	1449	11570	2.29	1478
	45°F	41°F	12740	2.63	1421	12480	2.52	1449	12220	2.42	1478	11960	2.32	1508
	47°F	43°F	13000	2.63	1450	12740	2.52	1479	12480	2.42	1509	12220	2.33	1539
50°F	46°F	12870	2.59	1457	12610	2.49	1486	12350	2.39	1516	12090	2.29	1546	
55°F	50°F	12740	2.55	1465	12480	2.45	1494	12220	2.35	1524	11960	2.26	1554	
60°F	55°F	12610	2.50	1479	12350	2.40	1509	12090	2.30	1539	11830	2.21	1570	
65°F	60°F	12350	2.55	1421	12090	2.44	1449	11830	2.35	1478	11570	2.25	1508	
70°F	64°F	12220	2.53	1414	11960	2.43	1442	11700	2.33	1471	11440	2.23	1500	
75°F	69°F	12090	2.52	1407	11830	2.42	1435	11570	2.32	1463	11310	2.22	1493	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

EXTENDED RATINGS

4LIV12HP115V1AH / 4LIV12HP115V1AO

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F																				
	0°F	8650	6336	73%	10.6	818	9182	6726	73%	10.7	861	9448	6921	73%	942.5	906	10246	7505	73%	10.3	999
	5°F	8783	6455	74%	10.5	835	9315	6846	73%	10.6	879	9581	7042	73%	962.0	925	10379	7629	73%	10.2	1020
	10°F	8982	6624	74%	10.5	852	9515	7017	74%	10.6	897	9781	7213	74%	981.5	944	10579	7802	74%	10.2	1040
	15°F	9182	6795	74%	10.6	869	9714	7188	74%	10.6	914	9980	7385	74%	1001.0	963	10779	7976	74%	10.2	1061
	20°F	9315	6916	74%	10.5	886	9847	7312	74%	10.6	932	10113	7509	74%	1020.5	981	10912	8102	74%	10.1	1082
	25°F	9448	7039	75%	10.5	903	9980	7435	75%	10.5	950	10246	7634	74%	1040.0	1000	11045	8228	74%	10.0	1103
	30°F	9781	7311	75%	10.6	919	10313	7709	75%	10.7	968	10579	7908	75%	1059.5	1019	11377	8505	75%	10.1	1123
	35°F	10113	7585	75%	10.8	936	10646	7984	75%	10.8	986	10912	8184	75%	1079.0	1038	11710	8783	75%	10.2	1144
	40°F	10313	7760	75%	10.8	953	10845	8161	75%	10.8	1003	11111	8361	75%	1098.5	1056	11910	8962	75%	10.2	1165
	45°F	10513	7937	75%	10.8	970	11045	8339	75%	10.8	1021	11311	8540	76%	1118.0	1075	12109	9143	75%	10.2	1185
	50°F	10845	8215	76%	11.0	987	11377	8618	76%	10.9	1039	11644	8820	76%	1137.5	1094	12442	9425	76%	10.3	1206
	55°F	11178	8495	76%	11.1	1004	11710	8900	76%	11.1	1057	11976	9102	76%	1157.0	1113	12775	9709	76%	10.4	1227
	60°F	11511	8777	76%	11.3	1021	12043	9183	76%	11.2	1075	12309	9386	76%	1176.5	1131	13107	9994	76%	10.5	1247
	65°F	11843	9060	76%	11.4	1038	12376	9467	77%	11.3	1093	12642	9671	76%	1196.0	1150	13440	10282	76%	10.6	1268
	70°F	12376	9498	77%	11.7	1055	12908	9907	77%	11.6	1110	13174	10111	77%	1215.5	1169	13972	10724	77%	10.8	1289
	75°F	12908	9939	77%	12.0	1072	13440	10349	77%	11.9	1128	13706	10554	77%	1235.0	1188	14505	11169	77%	11.1	1309
	80°F	13107	10125	77%	12.0	1089	13640	10537	77%	11.9	1146	13906	10742	77%	1254.5	1206	14704	11359	77%	11.1	1330
85°F	13307	10313	78%	12.0	1106	13839	10725	77%	11.9	1164	14105	10932	77%	1274.0	1225	14904	11550	78%	11.0	1351	
90°F	12908	10036	78%	11.6	1117	13440	10450	78%	11.4	1176	13706	10657	78%	1287.0	1238	14505	11277	78%	10.6	1364	
95°F	12509	9757	78%	11.1	1128	13041	10172	78%	11.0	1188	13307	10379	78%	1300.0	1250	14105	11002	78%	10.2	1378	
100°F	12176	9528	78%	10.5	1156	12708	9944	78%	10.4	1217	12974	10152	78%	1332.5	1281	13773	10777	78%	9.8	1413	
105°F	11843	9297	79%	10.0	1185	12376	9715	79%	9.9	1247	12642	9924	79%	1365.0	1313	13440	10550	78%	9.3	1447	
110°F	11644	9169	79%	9.6	1213	12176	9589	79%	9.5	1277	12442	9798	79%	1397.5	1344	13240	10427	79%	8.9	1481	
115°F	11444	9041	79%	9.2	1241	11976	9461	79%	9.2	1306	12242	9672	79%	1430.0	1375	13041	10302	79%	8.6	1516	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV12HP115V1AH / 4LIV12HP115V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	7922	2.35	989	7649	2.22	1009	7375	2.10	1029	7102	1.98	1049
	-10°F	-11°F	8400	2.46	999	8127	2.34	1019	7853	2.21	1039	7580	2.10	1060
	-5°F	-6°F	8878	2.58	1009	8605	2.45	1029	8331	2.33	1050	8058	2.21	1071
	0°F	-1°F	9287	2.64	1030	9014	2.52	1050	8741	2.39	1071	8468	2.27	1093
	5°F	3°F	9697	2.70	1051	9424	2.58	1072	9151	2.45	1093	8878	2.33	1115
	10°F	8°F	10244	2.80	1072	9970	2.67	1094	9697	2.55	1115	9424	2.43	1138
	15°F	13°F	10448	2.83	1083	10448	2.77	1105	10175	2.65	1127	9902	2.52	1149
	17°F	15°F	10653	2.85	1094	10926	2.87	1116	10653	2.74	1138	10380	2.62	1161
	20°F	17°F	11200	2.94	1116	10926	2.81	1139	10653	2.69	1161	10380	2.57	1185
	25°F	22°F	11609	2.99	1139	11336	2.86	1162	11063	2.74	1185	10790	2.62	1209
	30°F	27°F	11814	3.01	1151	11541	2.88	1174	11268	2.76	1197	10995	2.64	1221
	35°F	33°F	12019	3.03	1162	11746	2.90	1186	11473	2.78	1209	11200	2.66	1234
	40°F	36°F	12975	3.21	1186	12702	3.08	1210	12429	2.95	1234	12156	2.83	1259
	45°F	41°F	13385	3.24	1210	13112	3.11	1235	12839	2.99	1259	12565	2.87	1284
47°F	43°F	13658	3.24	1235	13385	3.11	1260	13112	2.99	1285	12839	2.87	1311	
50°F	46°F	13521	3.19	1241	13248	3.07	1266	12975	2.94	1291	12702	2.83	1317	
55°F	50°F	13385	3.14	1247	13112	3.02	1272	12839	2.90	1298	12565	2.78	1324	
60°F	55°F	13248	3.08	1260	12975	2.96	1285	12702	2.84	1311	12429	2.72	1337	
65°F	60°F	12975	3.14	1210	12702	3.01	1235	12429	2.89	1259	12156	2.77	1284	
70°F	64°F	12839	3.12	1204	12565	3.00	1228	12292	2.88	1253	12019	2.76	1278	
75°F	69°F	12702	3.11	1198	12429	2.98	1222	12156	2.86	1246	11883	2.74	1271	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

EXTENDED RATINGS

4LIV09HP230V1AH / 4LIV09HP230V1AO

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F																				
	0°F	6695	4904	73%	7.6	883	7107	5206	73%	7.6	930	7313	5357	73%	7.5	979	7931	5809	73%	7.3	1079
	5°F	6798	4997	74%	7.5	902	7210	5299	74%	7.6	949	7416	5451	74%	7.4	999	8034	5905	74%	7.3	1101
	10°F	6953	5127	74%	7.6	920	7365	5431	74%	7.6	968	7571	5583	74%	7.4	1019	8189	6039	74%	7.3	1124
	15°F	7107	5259	74%	7.6	938	7519	5564	74%	7.6	988	7725	5717	74%	7.4	1040	8343	6174	74%	7.3	1146
	20°F	7210	5353	74%	7.5	956	7622	5659	74%	7.6	1007	7828	5812	74%	7.4	1060	8446	6271	74%	7.2	1168
	25°F	7313	5448	75%	7.5	975	7725	5755	75%	7.5	1026	7931	5909	75%	7.3	1080	8549	6369	75%	7.2	1191
	30°F	7571	5659	75%	7.6	993	7983	5967	75%	7.6	1045	8189	6121	75%	7.4	1100	8807	6583	75%	7.3	1213
	35°F	7828	5871	75%	7.7	1011	8240	6180	75%	7.7	1064	8446	6335	75%	7.5	1121	9064	6798	75%	7.3	1235
	40°F	7983	6007	75%	7.8	1030	8395	6317	75%	7.7	1084	8601	6472	75%	7.5	1141	9219	6937	75%	7.3	1258
	45°F	8137	6143	76%	7.8	1048	8549	6455	76%	7.8	1103	8755	6610	76%	7.5	1161	9373	7077	76%	7.3	1280
	50°F	8395	6359	76%	7.9	1066	8807	6671	76%	7.8	1122	9013	6827	76%	7.6	1181	9631	7295	76%	7.4	1302
	55°F	8652	6576	76%	8.0	1084	9064	6889	76%	7.9	1141	9270	7045	76%	7.7	1202	9888	7515	76%	7.5	1325
	60°F	8910	6793	76%	8.1	1103	9322	7108	76%	8.0	1161	9528	7265	76%	7.8	1222	10146	7736	76%	7.5	1347
	65°F	9167	7013	77%	8.2	1121	9579	7328	77%	8.1	1180	9785	7486	77%	7.9	1242	10403	7958	77%	7.6	1369
	70°F	9579	7352	77%	8.4	1139	9991	7668	77%	8.3	1199	10197	7826	77%	8.1	1262	10815	8301	77%	7.8	1392
	75°F	9991	7693	77%	8.6	1157	10403	8010	77%	8.5	1218	10609	8169	77%	8.3	1283	11227	8645	77%	7.9	1414
	80°F	10146	7837	77%	8.6	1176	10558	8156	77%	8.5	1238	10764	8315	77%	8.3	1303	11382	8792	77%	7.9	1436
	85°F	10300	7983	78%	8.6	1194	10712	8302	78%	8.5	1257	10918	8461	78%	8.3	1323	11536	8940	78%	7.9	1459
	90°F	9991	7768	78%	8.3	1206	10403	8088	78%	8.2	1270	10609	8249	78%	7.9	1337	11227	8729	78%	7.6	1473
95°F	9682	7552	78%	7.9	1218	10094	7873	78%	7.9	1283	10300	8034	78%	7.6	1350	10918	8516	78%	7.3	1488	
100°F	9425	7375	78%	7.5	1249	9837	7697	78%	7.5	1315	10043	7858	78%	7.3	1384	10661	8342	78%	7.0	1526	
105°F	9167	7196	79%	7.2	1279	9579	7520	79%	7.1	1347	9785	7681	79%	6.9	1418	10403	8166	79%	6.7	1563	
110°F	9013	7097	79%	6.9	1310	9425	7422	79%	6.8	1379	9631	7584	79%	6.6	1451	10249	8071	79%	6.4	1600	
115°F	8858	6998	79%	6.6	1340	9270	7323	79%	6.6	1411	9476	7486	79%	6.4	1485	10094	7974	79%	6.2	1637	
	120°F																				
	122°F																				
	125°F																				
	129°F																				

*Maximum Output values are not based on AHRI test conditions

- LEGEND:**
- W - Watts
 - DB - Dry Bulb
 - TC - Total Capacity
 - SC - Total Capacity
 - SHR - Sensible Heat Ratio
 - COP - Coefficient of Performance

EXTENDED RATINGS

4LIV09HP230V1AH / 4LIV09HP230V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	7076	1.79	1161	6832	1.69	1184	6588	1.60	1208	6344	1.51	1232
	-10°F	-11°F	7503	1.87	1173	7259	1.78	1196	7015	1.68	1220	6771	1.59	1245
	-5°F	-6°F	7930	1.96	1185	7686	1.86	1208	7442	1.77	1233	7198	1.68	1257
	0°F	-1°F	8296	2.01	1209	8052	1.91	1233	7808	1.82	1258	7564	1.73	1283
	5°F	3°F	8662	2.06	1234	8418	1.96	1258	8174	1.87	1283	7930	1.78	1309
	10°F	8°F	9150	2.13	1259	8906	2.03	1284	8662	1.94	1310	8418	1.85	1336
	15°F	13°F	9333	2.15	1272	9333	2.11	1297	9089	2.01	1323	8845	1.92	1349
	17°F	15°F	9516	2.17	1284	9760	2.18	1310	9516	2.09	1336	9272	1.99	1363
	20°F	17°F	10004	2.24	1311	9760	2.14	1337	9516	2.05	1364	9272	1.95	1391
	25°F	22°F	10370	2.27	1337	10126	2.18	1364	9882	2.08	1391	9638	1.99	1419
	30°F	27°F	10553	2.29	1351	10309	2.19	1378	10065	2.10	1406	9821	2.01	1434
	35°F	33°F	10736	2.31	1365	10492	2.21	1392	10248	2.12	1420	10004	2.02	1448
	40°F	36°F	11590	2.44	1393	11346	2.34	1420	11102	2.25	1449	10858	2.15	1478
	45°F	41°F	11956	2.47	1421	11712	2.37	1449	11468	2.27	1478	11224	2.18	1508
47°F	43°F	12200	2.47	1450	11956	2.37	1479	11712	2.28	1509	11468	2.18	1539	
50°F	46°F	12078	2.43	1457	11834	2.33	1486	11590	2.24	1516	11346	2.15	1546	
55°F	50°F	11956	2.39	1465	11712	2.30	1494	11468	2.21	1524	11224	2.12	1554	
60°F	55°F	11834	2.35	1479	11590	2.25	1509	11346	2.16	1539	11102	2.07	1570	
65°F	60°F	11590	2.39	1421	11346	2.29	1449	11102	2.20	1478	10858	2.11	1508	
70°F	64°F	11468	2.38	1414	11224	2.28	1442	10980	2.19	1471	10736	2.10	1500	
75°F	69°F	11346	2.36	1407	11102	2.27	1435	10858	2.17	1463	10614	2.08	1493	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

EXTENDED RATINGS

4LIV12HP230V1AH / 4LIV12HP230V1AO

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Return Air Temperature																			
	70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
-20°F																				
-15°F																				
-10°F																				
-5°F																				
0°F	8650	6336	73%	10.6	818	9182	6726	73%	10.7	861	9448	6921	73%	942.5	906	10246	7505	73%	10.3	999
5°F	8783	6455	74%	10.5	835	9315	6846	73%	10.6	879	9581	7042	73%	962.0	925	10379	7629	73%	10.2	1020
10°F	8982	6624	74%	10.5	852	9515	7017	74%	10.6	897	9781	7213	74%	981.5	944	10579	7802	74%	10.2	1040
15°F	9182	6795	74%	10.6	869	9714	7188	74%	10.6	914	9980	7385	74%	1001.0	963	10779	7976	74%	10.2	1061
20°F	9315	6916	74%	10.5	886	9847	7312	74%	10.6	932	10113	7509	74%	1020.5	981	10912	8102	74%	10.1	1082
25°F	9448	7039	75%	10.5	903	9980	7435	75%	10.5	950	10246	7634	74%	1040.0	1000	11045	8228	74%	10.0	1103
30°F	9781	7311	75%	10.6	919	10313	7709	75%	10.7	968	10579	7908	75%	1059.5	1019	11377	8505	75%	10.1	1123
35°F	10113	7585	75%	10.8	936	10646	7984	75%	10.8	986	10912	8184	75%	1079.0	1038	11710	8783	75%	10.2	1144
40°F	10313	7760	75%	10.8	953	10845	8161	75%	10.8	1003	11111	8361	75%	1098.5	1056	11910	8962	75%	10.2	1165
45°F	10513	7937	75%	10.8	970	11045	8339	75%	10.8	1021	11311	8540	76%	1118.0	1075	12109	9143	75%	10.2	1185
50°F	10845	8215	76%	11.0	987	11377	8618	76%	10.9	1039	11644	8820	76%	1137.5	1094	12442	9425	76%	10.3	1206
55°F	11178	8495	76%	11.1	1004	11710	8900	76%	11.1	1057	11976	9102	76%	1157.0	1113	12775	9709	76%	10.4	1227
60°F	11511	8777	76%	11.3	1021	12043	9183	76%	11.2	1075	12309	9386	76%	1176.5	1131	13107	9994	76%	10.5	1247
65°F	11843	9060	76%	11.4	1038	12376	9467	77%	11.3	1093	12642	9671	76%	1196.0	1150	13440	10282	76%	10.6	1268
70°F	12376	9498	77%	11.7	1055	12908	9907	77%	11.6	1110	13174	10111	77%	1215.5	1169	13972	10724	77%	10.8	1289
75°F	12908	9939	77%	12.0	1072	13440	10349	77%	11.9	1128	13706	10554	77%	1235.0	1188	14505	11169	77%	11.1	1309
80°F	13107	10125	77%	12.0	1089	13640	10537	77%	11.9	1146	13906	10742	77%	1254.5	1206	14704	11359	77%	11.1	1330
85°F	13307	10313	78%	12.0	1106	13839	10725	77%	11.9	1164	14105	10932	77%	1274.0	1225	14904	11550	78%	11.0	1351
90°F	12908	10036	78%	11.6	1117	13440	10450	78%	11.4	1176	13706	10657	78%	1287.0	1238	14505	11277	78%	10.6	1364
95°F	12509	9757	78%	11.1	1128	13041	10172	78%	11.0	1188	13307	10379	78%	1300.0	1250	14105	11002	78%	10.2	1378
100°F	12176	9528	78%	10.5	1156	12708	9944	78%	10.4	1217	12974	10152	78%	1332.5	1281	13773	10777	78%	9.8	1413
105°F	11843	9297	79%	10.0	1185	12376	9715	79%	9.9	1247	12642	9924	79%	1365.0	1313	13440	10550	78%	9.3	1447
110°F	11644	9169	79%	9.6	1213	12176	9589	79%	9.5	1277	12442	9798	79%	1397.5	1344	13240	10427	79%	8.9	1481
115°F	11444	9041	79%	9.2	1241	11976	9461	79%	9.2	1306	12242	9672	79%	1430.0	1375	13041	10302	79%	8.6	1516
120°F																				
122°F																				
125°F																				
129°F																				

MAX OUTPUT*

*Maximum Output values are not based on AHRI test conditions

- LEGEND: W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV12HP230V1AH / 4LIV12HP230V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	7922	2.35	989	7649	2.22	1009	7375	2.10	1029	7102	1.98	1049
	-10°F	-11°F	8400	2.46	999	8127	2.34	1019	7853	2.21	1039	7580	2.10	1060
	-5°F	-6°F	8878	2.58	1009	8605	2.45	1029	8331	2.33	1050	8058	2.21	1071
	0°F	-1°F	9287	2.64	1030	9014	2.52	1050	8741	2.39	1071	8468	2.27	1093
	5°F	3°F	9697	2.70	1051	9424	2.58	1072	9151	2.45	1093	8878	2.33	1115
	10°F	8°F	10244	2.80	1072	9970	2.67	1094	9697	2.55	1115	9424	2.43	1138
	15°F	13°F	10448	2.83	1083	10448	2.77	1105	10175	2.65	1127	9902	2.52	1149
	17°F	15°F	10653	2.85	1094	10926	2.87	1116	10653	2.74	1138	10380	2.62	1161
	20°F	17°F	11200	2.94	1116	10926	2.81	1139	10653	2.69	1161	10380	2.57	1185
	25°F	22°F	11609	2.99	1139	11336	2.86	1162	11063	2.74	1185	10790	2.62	1209
	30°F	27°F	11814	3.01	1151	11541	2.88	1174	11268	2.76	1197	10995	2.64	1221
	35°F	33°F	12019	3.03	1162	11746	2.90	1186	11473	2.78	1209	11200	2.66	1234
	40°F	36°F	12975	3.21	1186	12702	3.08	1210	12429	2.95	1234	12156	2.83	1259
	45°F	41°F	13385	3.24	1210	13112	3.11	1235	12839	2.99	1259	12565	2.87	1284
	47°F	43°F	13658	3.24	1235	13385	3.11	1260	13112	2.99	1285	12839	2.87	1311
	50°F	46°F	13521	3.19	1241	13248	3.07	1266	12975	2.94	1291	12702	2.83	1317
	55°F	50°F	13385	3.14	1247	13112	3.02	1272	12839	2.90	1298	12565	2.78	1324
60°F	55°F	13248	3.08	1260	12975	2.96	1285	12702	2.84	1311	12429	2.72	1337	
65°F	60°F	12975	3.14	1210	12702	3.01	1235	12429	2.89	1259	12156	2.77	1284	
70°F	64°F	12839	3.12	1204	12565	3.00	1228	12292	2.88	1253	12019	2.76	1278	
75°F	69°F	12702	3.11	1198	12429	2.98	1222	12156	2.86	1246	11883	2.74	1271	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

EXTENDED RATINGS

4LIV18HP230V1AH / 4LIV18HP230V1AO

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F																				
	0°F	9607	6436	67%	8.8	1090	9904	6833	69%	8.9	1112	10158	7110	70%	9.0	1135	10869	7717	71%	9.1	1191
	5°F	9904	6734	68%	8.9	1112	10210	7147	70%	9.0	1135	10472	7435	71%	9.0	1158	11205	8067	72%	9.2	1216
	10°F	10210	6943	68%	9.0	1135	10526	7368	70%	9.1	1158	10796	7665	71%	9.1	1181	11551	8317	72%	9.3	1241
	15°F	10526	7157	68%	9.1	1158	10851	7596	70%	9.2	1181	11129	7902	71%	9.2	1206	11909	8574	72%	9.4	1266
	20°F	10851	7379	68%	9.2	1181	11187	7831	70%	9.3	1206	11474	8146	71%	9.3	1230	12277	8839	72%	9.5	1292
	25°F	11187	7719	69%	9.3	1206	11533	8188	71%	9.4	1230	11829	8517	72%	9.4	1255	12657	9239	73%	9.6	1318
	30°F	11533	7958	69%	9.4	1230	11889	8442	71%	9.5	1255	12194	8780	72%	9.5	1281	13048	9525	73%	9.7	1345
	35°F	11889	8204	69%	9.5	1255	12257	8703	71%	9.6	1281	12571	9051	72%	9.6	1307	13452	9820	73%	9.8	1372
	40°F	12257	8457	69%	9.6	1281	12636	8972	71%	9.7	1307	12960	9331	72%	9.7	1334	13868	10123	73%	9.9	1400
	45°F	12636	8845	70%	9.7	1307	13027	9380	72%	9.8	1334	13361	9754	73%	9.8	1361	14296	10579	74%	10.0	1429
	50°F	13027	9119	70%	9.8	1334	13430	9670	72%	9.9	1361	13774	10055	73%	9.9	1389	14739	10907	74%	10.1	1458
	55°F	13430	9401	70%	9.9	1361	13845	9969	72%	10.0	1389	14200	10366	73%	10.0	1417	15194	11244	74%	10.2	1488
	60°F	13845	9692	70%	10.0	1389	14274	10277	72%	10.1	1417	14640	10687	73%	10.1	1446	15664	11592	74%	10.3	1518
	65°F	15384	10922	71%	10.1	1526	15860	11577	73%	10.2	1557	16266	12037	74%	10.2	1589	17405	13054	75%	10.4	1668
	70°F	15698	11145	71%	10.2	1541	16183	11814	73%	10.3	1573	16598	12283	74%	10.3	1605	17760	13320	75%	10.5	1685
	75°F	16183	11490	71%	10.3	1573	16684	12179	73%	10.4	1605	17112	12663	74%	10.4	1638	18309	13732	75%	10.6	1720
80°F	19039	13708	72%	10.4	1829	19628	14525	74%	10.5	1866	20131	15098	75%	10.6	1904	21540	16371	76%	10.8	2000	
85°F	18485	13309	72%	9.9	1866	19056	14102	74%	10.0	1904	19545	14659	75%	10.1	1943	20913	15894	76%	10.2	2040	
90°F	19255	13863	72%	9.4	2051	19850	14689	74%	9.5	2093	20359	15269	75%	9.5	2135	21784	16556	76%	9.7	2242	
95°F	18877	13592	72%	9.1	2072	19461	14401	74%	9.2	2114	19960	14970	75%	9.3	2157	21357	16231	76%	9.4	2265	
100°F	16989	12232	72%	9.0	1885	17515	12961	74%	9.1	1924	17964	13473	75%	9.2	1963	19221	14608	76%	9.3	2061	
105°F	15947	11641	73%	8.9	1785	16440	12330	75%	9.0	1822	16861	12815	76%	9.1	1859	18042	13892	77%	9.2	1952	
110°F	15558	11357	73%	8.5	1822	16039	12029	75%	8.6	1859	16450	12502	76%	8.7	1897	17602	13553	77%	8.8	1992	
115°F	14624	10676	73%	7.9	1858	15076	11307	75%	8.0	1896	15463	11752	76%	8.0	1935	16545	12740	77%	8.1	2032	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

- LEGEND: W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV18HP230V1AH / 4LIV18HP230V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	9924	1.72	1695	9676	1.64	1729	9386	1.56	1764	9010	1.47	1799
	-10°F	-11°F	10557	1.77	1748	10293	1.69	1783	9985	1.61	1818	9585	1.51	1855
	-5°F	-6°F	11231	1.83	1802	10950	1.75	1838	10622	1.66	1875	10197	1.56	1912
	0°F	-1°F	11822	1.87	1858	11527	1.78	1895	11181	1.70	1933	10734	1.60	1971
	5°F	3°F	12315	1.88	1915	12007	1.80	1953	11647	1.71	1992	11181	1.61	2032
	10°F	8°F	13517	2.03	1949	13179	1.94	1988	12784	1.85	2027	12273	1.74	2068
	15°F	13°F	14125	2.09	1978	13772	2.00	2018	13359	1.90	2058	12824	1.79	2100
	17°F	15°F	14732	2.14	2019	14364	2.04	2059	13933	1.94	2100	13376	1.83	2142
	20°F	17°F	15188	2.16	2060	14808	2.07	2101	14364	1.96	2143	13789	1.85	2186
	25°F	22°F	15742	2.24	2057	15349	2.14	2098	14888	2.04	2140	14293	1.92	2183
	30°F	27°F	16313	2.33	2055	15905	2.22	2096	15428	2.11	2138	14811	1.99	2181
	35°F	33°F	16993	2.43	2051	16568	2.32	2092	16071	2.21	2134	15428	2.08	2177
	40°F	36°F	20519	2.77	2174	20006	2.64	2218	19406	2.51	2262	18630	2.37	2307
	45°F	41°F	21154	2.82	2196	20625	2.70	2240	20006	2.57	2285	19206	2.42	2330
47°F	43°F	21471	2.84	2218	20935	2.71	2262	20306	2.58	2308	19494	2.43	2354	
50°F	46°F	18036	2.91	1819	17585	2.78	1855	17057	2.64	1892	16375	2.49	1930	
55°F	50°F	17675	2.88	1801	17233	2.75	1837	16716	2.62	1873	16048	2.46	1911	
60°F	55°F	15908	2.85	1638	15510	2.72	1671	15045	2.59	1705	14443	2.43	1739	
65°F	60°F	15430	2.82	1606	15045	2.69	1638	14593	2.56	1671	14010	2.41	1704	
70°F	64°F	12344	2.78	1301	12036	2.66	1327	11675	2.53	1353	11208	2.38	1380	
75°F	69°F	10493	2.72	1132	10230	2.60	1154	9923	2.47	1177	9527	2.33	1201	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F																				
	0°F	16412	11899	73%	10.4	1578	17422	12631	73%	10.5	1661	17927	12997	73%	10.3	1749	19442	14095	73%	10.1	1928
	5°F	16664	12082	73%	10.3	1611	17674	12814	73%	10.4	1696	18179	13180	73%	10.2	1785	19694	14278	73%	10.0	1968
	10°F	17043	12356	73%	10.4	1644	18053	13088	73%	10.4	1730	18558	13455	73%	10.2	1821	20073	14553	73%	10.0	2008
	15°F	17422	12631	73%	10.4	1676	18432	13363	73%	10.4	1764	18937	13729	73%	10.2	1857	20452	14827	73%	10.0	2048
	20°F	17674	12814	73%	10.3	1709	18684	13546	73%	10.4	1799	19189	13912	73%	10.1	1893	20704	15011	73%	9.9	2087
	25°F	17927	12997	73%	10.3	1741	18937	13729	73%	10.3	1833	19442	14095	73%	10.1	1930	20957	15194	73%	9.9	2127
	30°F	18558	13455	73%	10.5	1774	19568	14187	73%	10.5	1867	20073	14553	73%	10.2	1966	21588	15651	73%	10.0	2167
	35°F	19189	13912	73%	10.6	1807	20199	14644	73%	10.6	1902	20704	15011	73%	10.3	2002	22219	16109	73%	10.1	2207
	40°F	19568	14187	73%	10.6	1839	20578	14919	73%	10.6	1936	21083	15285	73%	10.3	2038	22598	16383	73%	10.1	2247
	45°F	19947	14461	73%	10.7	1872	20957	15194	73%	10.6	1971	21462	15560	73%	10.3	2074	22977	16658	73%	10.0	2287
	50°F	20578	14919	73%	10.8	1905	21588	15651	73%	10.8	2005	22093	16017	73%	10.5	2111	23608	17116	73%	10.1	2327
	55°F	21209	15377	73%	10.9	1937	22219	16109	73%	10.9	2039	22724	16475	73%	10.6	2147	24239	17573	73%	10.2	2367
	60°F	21840	15834	73%	11.1	1970	22850	16567	73%	11.0	2074	23355	16933	73%	10.7	2183	24870	18031	73%	10.3	2407
	65°F	22472	16292	73%	11.2	2003	23482	17024	73%	11.1	2108	23987	17390	73%	10.8	2219	25501	18489	73%	10.4	2446
	70°F	23482	17024	73%	11.5	2035	24492	17756	73%	11.4	2142	24997	18122	73%	11.1	2255	26511	19221	73%	10.7	2486
	75°F	24492	17756	73%	11.8	2068	25501	18489	73%	11.7	2177	26006	18855	73%	11.3	2291	27521	19953	73%	10.9	2526
	80°F	24870	18031	73%	11.8	2101	25880	18763	73%	11.7	2211	26385	19129	73%	11.3	2328	27900	20228	73%	10.9	2566
85°F	25249	18306	73%	11.8	2133	26259	19038	73%	11.7	2246	26764	19404	73%	11.3	2364	28279	20502	73%	10.9	2606	
90°F	24492	17756	73%	11.4	2155	25501	18489	73%	11.2	2268	26006	18855	73%	10.9	2388	27521	19953	73%	10.5	2633	
95°F	23734	17207	73%	10.9	2177	24744	17939	73%	10.8	2291	25249	18306	73%	10.5	2412	26764	19404	73%	10.1	2659	
100°F	23103	16750	73%	10.4	2231	24113	17482	73%	10.3	2349	24618	17848	73%	10.0	2472	26133	18946	73%	9.6	2726	
105°F	22472	16292	73%	9.8	2286	23482	17024	73%	9.8	2406	23987	17390	73%	9.5	2533	25501	18489	73%	9.1	2792	
110°F	22093	16017	73%	9.4	2340	23103	16750	73%	9.4	2463	23608	17116	73%	9.1	2593	25123	18214	73%	8.8	2859	
115°F	21714	15743	73%	9.1	2395	22724	16475	73%	9.0	2521	23229	16841	73%	8.8	2653	24744	17939	73%	8.5	2925	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS **4LIV24HP230V1AH / 4LIV24HP230V1AO**

HEATING PERFORMANCE														
Outdoor Ambient Temperature			Return Air Temperature											
			70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)		
			TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	15436	2.33	1946	14904	2.20	1985	14372	2.08	2024	13839	1.96	2065
	-10°F	-11°F	16368	2.44	1966	15835	2.31	2005	15303	2.19	2045	14771	2.08	2086
	-5°F	-6°F	17299	2.55	1985	16767	2.43	2025	16235	2.30	2066	15702	2.18	2107
	0°F	-1°F	18098	2.62	2026	17565	2.49	2067	17033	2.37	2108	16501	2.25	2150
	5°F	3°F	18896	2.68	2067	18364	2.55	2109	17831	2.43	2151	17299	2.31	2194
	10°F	8°F	19961	2.77	2110	19428	2.65	2152	18896	2.52	2195	18364	2.40	2239
	15°F	13°F	20360	2.80	2131	20360	2.75	2174	19827	2.62	2217	19295	2.50	2262
	17°F	15°F	20759	2.83	2153	21291	2.84	2196	20759	2.72	2240	20227	2.60	2284
	20°F	17°F	21823	2.91	2197	21291	2.79	2240	20759	2.66	2285	20227	2.54	2331
	25°F	22°F	22622	2.96	2241	22090	2.83	2286	21557	2.71	2332	21025	2.59	2379
	30°F	27°F	23021	2.98	2264	22489	2.85	2310	21957	2.73	2356	21424	2.61	2403
	35°F	33°F	23420	3.00	2287	22888	2.88	2333	22356	2.75	2379	21823	2.64	2427
	40°F	36°F	25283	3.18	2334	24751	3.05	2380	24219	2.92	2428	23686	2.80	2477
	45°F	41°F	26082	3.21	2381	25549	3.08	2429	25017	2.96	2478	24485	2.84	2527
	47°F	43°F	26614	3.21	2430	26082	3.08	2479	25549	2.96	2528	25017	2.84	2579
50°F	46°F	26348	3.16	2442	25816	3.04	2491	25283	2.92	2541	24751	2.80	2592	
55°F	50°F	26082	3.11	2454	25549	2.99	2503	25017	2.87	2553	24485	2.76	2605	
60°F	55°F	25816	3.05	2479	25283	2.93	2528	24751	2.81	2579	24219	2.70	2630	
65°F	60°F	25283	3.11	2381	24751	2.99	2429	24219	2.86	2478	23686	2.75	2527	
70°F	64°F	25017	3.09	2369	24485	2.97	2417	23953	2.85	2465	23420	2.73	2514	
75°F	69°F	24751	3.08	2357	24219	2.95	2404	23686	2.83	2452	23154	2.71	2501	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

- LEGEND:** W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV30HP230V1AH / 4LIV30HP230V1AO

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F	11560	8381	73%	3.7	921	14280	10353	73%	4.3	969	17000	12325	73%	4.9	1020	19040	13233	70%	5.3	1063
	0°F	12580	9121	73%	3.9	951	15300	11093	73%	4.5	1001	18020	13065	73%	5.0	1054	20060	13942	70%	5.4	1098
	5°F	13940	10107	73%	4.2	982	16660	12079	73%	4.7	1034	19380	14147	73%	5.2	1088	21420	14887	70%	5.5	1133
	10°F	14960	10846	73%	4.3	1013	17680	12818	73%	4.9	1066	20400	14994	74%	5.3	1122	22440	15596	70%	5.6	1169
	15°F	15980	11586	73%	4.5	1043	18700	13558	73%	5.0	1098	21420	15851	74%	5.4	1156	23460	16305	70%	5.7	1204
	20°F	17340	12658	73%	4.5	1135	20060	14644	73%	4.9	1195	22780	16857	74%	5.3	1258	24820	17374	70%	5.6	1310
	25°F	14960	10996	74%	3.6	1227	17680	12995	74%	4.0	1292	20400	15198	75%	4.4	1360	22440	15820	71%	4.6	1417
	30°F	15300	11322	74%	3.7	1227	18020	13335	74%	4.1	1292	20740	15555	75%	4.5	1360	22780	16174	71%	4.7	1417
	35°F	15640	11574	74%	3.5	1320	18360	13586	74%	3.9	1389	21080	15915	76%	4.2	1462	23120	16415	71%	4.5	1523
	40°F	16320	12158	75%	3.4	1412	19040	14185	75%	3.8	1486	21760	16538	76%	4.1	1564	23800	17017	72%	4.3	1629
	45°F	18360	13770	75%	3.6	1504	21080	15810	75%	3.9	1583	23800	18207	77%	4.2	1666	25840	18605	72%	4.4	1735
	50°F	20060	15145	76%	3.7	1596	22780	17199	76%	4.0	1680	25500	19253	76%	4.2	1768	27540	19967	73%	4.4	1842
	55°F	21080	16021	76%	3.7	1688	23800	18088	76%	3.9	1777	26520	20155	76%	4.2	1870	28560	20849	73%	4.3	1948
	60°F	22780	17427	77%	3.6	1841	25500	19508	77%	3.9	1938	28220	21588	77%	4.1	2040	30260	22241	74%	4.2	2125
	65°F	24480	18850	77%	3.6	1995	27200	20944	77%	3.8	2100	29920	23038	77%	4.0	2210	31960	23650	74%	4.1	2302
	70°F	25500	19763	78%	3.5	2148	28220	21871	78%	3.7	2261	30940	23979	78%	3.8	2380	32980	24570	75%	3.9	2479
	75°F	26180	20420	78%	3.1	2455	28900	22542	78%	3.3	2584	31620	24664	78%	3.4	2720	33660	25245	75%	3.5	2833
	80°F	27880	21886	79%	3.1	2670	30600	24021	79%	3.2	2810	33320	26156	79%	3.3	2958	35360	26697	76%	3.4	3081
85°F	31960	25248	79%	3.3	2854	34680	27397	79%	3.4	3004	37400	29546	79%	3.5	3162	39440	29974	76%	3.5	3294	
90°F	30260	23905	79%	3.0	2976	32980	26054	79%	3.1	3133	35700	28203	79%	3.2	3298	37740	28682	76%	3.2	3435	
95°F	28560	22562	79%	2.7	3069	31280	24711	79%	2.8	3230	34000	26860	79%	2.9	3400	36040	27390	76%	3.0	3542	
100°F	27880	22025	79%	2.6	3099	30600	24174	79%	2.8	3262	33320	26323	79%	2.8	3434	35360	26874	76%	2.9	3577	
105°F	25840	20414	79%	2.4	3130	28560	22562	79%	2.5	3295	31280	24711	79%	2.6	3468	33320	25323	76%	2.7	3613	
110°F	23800	18802	79%	2.2	3161	26520	20951	79%	2.3	3327	29240	23100	79%	2.5	3502	31280	23773	76%	2.5	3648	
115°F	20740	16385	79%	1.9	3222	23460	18533	79%	2.0	3392	26180	20682	79%	2.2	3570	28220	21447	76%	2.2	3719	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

- LEGEND:** W - Watts
 DB - Dry Bulb
 TC - Total Capacity
 SC - Total Capacity
 SHR - Sensible Heat Ratio
 COP - Coefficient of Performance

EXTENDED RATINGS

4LIV30HP230V1AH / 4LIV30HP230V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	17750	1.94	2686	17040	1.84	2713	16330	1.75	2740	15265	1.60	2795
	-10°F	-11°F	19170	1.94	2890	18460	1.85	2919	17750	1.76	2948	16685	1.63	3007
	-5°F	-6°F	20590	1.95	3094	19880	1.86	3125	19170	1.78	3156	18105	1.65	3219
	0°F	-1°F	22010	2.00	3230	21300	1.91	3262	20590	1.83	3295	19525	1.70	3361
	5°F	3°F	23430	2.04	3366	22720	1.96	3400	22010	1.88	3434	20945	1.75	3502
	10°F	8°F	25205	2.11	3502	24495	2.03	3537	23785	1.95	3572	22720	1.83	3644
	15°F	13°F	26625	2.14	3638	25915	2.07	3674	25205	1.99	3711	24140	1.87	3785
	17°F	15°F	28045	2.24	3672	27335	2.16	3709	26625	2.08	3746	25560	1.96	3821
	20°F	17°F	29110	2.37	3604	28400	2.29	3640	27690	2.21	3676	26625	2.08	3750
	25°F	22°F	30175	2.48	3570	29465	2.40	3606	28755	2.31	3642	27690	2.18	3715
	30°F	27°F	30885	2.56	3536	30175	2.48	3571	29465	2.39	3607	28400	2.26	3679
	35°F	33°F	31595	2.64	3502	30885	2.56	3537	30175	2.48	3572	29110	2.34	3644
	40°F	36°F	33370	2.82	3468	32660	2.73	3503	31950	2.65	3538	30885	2.51	3608
	45°F	41°F	34435	2.94	3434	33725	2.85	3468	33015	2.76	3503	31950	2.62	3573
	47°F	43°F	35500	3.06	3400	34790	2.97	3434	34080	2.88	3468	33015	2.74	3538
	50°F	46°F	36210	3.09	3434	35500	3.00	3468	34790	2.91	3503	33725	2.77	3573
	55°F	50°F	36920	3.12	3468	36210	3.03	3503	35500	2.94	3538	34435	2.80	3608
60°F	55°F	37630	3.15	3502	36920	3.06	3537	36210	2.97	3572	35145	2.83	3644	
65°F	60°F	38340	3.18	3536	37630	3.09	3571	36920	3.00	3607	35855	2.86	3679	
70°F	64°F	36565	3.32	3230	35855	3.22	3262	35145	3.13	3295	34080	2.97	3361	
75°F	69°F	33725	4.15	2380	33015	4.03	2404	32305	3.90	2428	31240	3.70	2476	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance

EXTENDED RATINGS

4LIV36HP230V1AH / 4LIV36HP230V1AO

COOLING PERFORMANCE																					
Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)
MAX OUTPUT*	-20°F																				
	-15°F																				
	-10°F																				
	-5°F	12580	9121	73%	3.6	1029	15540	11267	73%	4.2	1083	18500	13413	73%	4.8	1140	20720	14400	70%	5.1	1188
	0°F	13690	9925	73%	3.8	1063	16650	12071	73%	4.4	1119	19610	14217	73%	4.9	1178	21830	15172	70%	5.2	1227
	5°F	15170	10998	73%	4.1	1097	18130	13144	73%	4.6	1155	21090	15396	73%	5.1	1216	23310	16201	70%	5.4	1267
	10°F	16280	11803	73%	4.2	1132	19240	13949	73%	4.7	1191	22200	16317	74%	5.2	1254	24420	16972	70%	5.5	1306
	15°F	17390	12608	73%	4.4	1166	20350	14754	73%	4.9	1227	23310	17249	74%	5.3	1292	25530	17743	70%	5.6	1346
	20°F	18870	13775	73%	4.4	1269	21830	15936	73%	4.8	1336	24790	18345	74%	5.2	1406	27010	18907	70%	5.4	1465
	25°F	16280	11966	74%	3.5	1372	19240	14141	74%	3.9	1444	22200	16539	75%	4.3	1520	24420	17216	71%	4.5	1583
	30°F	16650	12321	74%	3.6	1372	19610	14511	74%	4.0	1444	22570	16928	75%	4.4	1520	24790	17601	71%	4.6	1583
	35°F	17020	12595	74%	3.4	1475	19980	14785	74%	3.8	1552	22940	17320	76%	4.1	1634	25160	17864	71%	4.3	1702
	40°F	17760	13231	75%	3.3	1578	20720	15436	75%	3.7	1661	23680	17997	76%	4.0	1748	25900	18519	72%	4.2	1821
	45°F	19980	14985	75%	3.5	1681	22940	17205	75%	3.8	1769	25900	19814	77%	4.1	1862	28120	20246	72%	4.3	1940
	50°F	21830	16482	76%	3.6	1783	24790	18717	76%	3.9	1877	27750	20951	76%	4.1	1976	29970	21728	73%	4.3	2058
	55°F	22940	17434	76%	3.6	1886	25900	19684	76%	3.8	1986	28860	21934	76%	4.1	2090	31080	22688	73%	4.2	2177
	60°F	24790	18964	77%	3.5	2058	27750	21229	77%	3.8	2166	30710	23493	77%	4.0	2280	32930	24204	74%	4.1	2375
	65°F	26640	20513	77%	3.5	2229	29600	22792	77%	3.7	2347	32560	25071	77%	3.9	2470	34780	25737	74%	4.0	2573
	70°F	27750	21506	78%	3.4	2401	30710	23800	78%	3.6	2527	33670	26094	78%	3.7	2660	35890	26738	75%	3.8	2771
	75°F	28490	22222	78%	3.0	2744	31450	24531	78%	3.2	2888	34410	26840	78%	3.3	3040	36630	27473	75%	3.4	3167
	80°F	30340	23817	79%	3.0	2984	33300	26141	79%	3.1	3141	36260	28464	79%	3.2	3306	38480	29052	76%	3.3	3444
85°F	34780	27476	79%	3.2	3189	37740	29815	79%	3.3	3357	40700	32153	79%	3.4	3534	42920	32619	76%	3.4	3681	
90°F	32930	26015	79%	2.9	3327	35890	28353	79%	3.0	3502	38850	30692	79%	3.1	3686	41070	31213	76%	3.1	3840	
95°F	31080	24553	79%	2.7	3430	34040	26892	79%	2.8	3610	37000	29230	79%	2.9	3800	39220	29807	76%	2.9	3958	
100°F	30340	23969	79%	2.6	3464	33300	26307	79%	2.7	3646	36260	28645	79%	2.8	3838	38480	29245	76%	2.8	3998	
105°F	27380	21630	79%	2.3	3498	30340	23969	79%	2.4	3682	33300	26307	79%	2.5	3876	35520	26995	76%	2.6	4038	
110°F	25160	19876	79%	2.1	3532	28120	22215	79%	2.2	3718	31080	24553	79%	2.3	3914	33300	25308	76%	2.4	4077	
115°F	22570	17830	79%	1.8	3601	25530	20169	79%	2.0	3791	28490	22507	79%	2.1	3990	30710	23340	76%	2.2	4156	
120°F																					
122°F																					
125°F																					
129°F																					

*Maximum Output values are not based on AHRI test conditions

- LEGEND:**
- W - Watts
 - DB - Dry Bulb
 - TC - Total Capacity
 - SC - Total Capacity
 - SHR - Sensible Heat Ratio
 - COP - Coefficient of Performance

EXTENDED RATINGS

4LIV36HP230V1AH / 4LIV36HP230V1AO

HEATING PERFORMANCE														
Outdoor Ambient Temperature		Return Air Temperature												
		70°F (DB)			75°F (DB)			80°F (DB)			90°F (DB)			
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	
MAX OUTPUT*	DB	WB												
	-22°F	-22.5°F												
	-20°F	-20.5°F												
	-15°F	-16°F	19250	1.90	2963	18480	1.81	2992	17710	1.72	3022	16555	1.57	3082
	-10°F	-11°F	20790	1.91	3188	20020	1.82	3219	19250	1.74	3252	18095	1.60	3317
	-5°F	-6°F	22330	1.92	3413	21560	1.83	3447	20790	1.75	3481	19635	1.62	3551
	0°F	-1°F	23870	1.96	3563	23100	1.88	3598	22330	1.80	3634	21175	1.67	3707
	5°F	3°F	25410	2.01	3713	24640	1.93	3750	23870	1.85	3787	22715	1.72	3863
	10°F	8°F	27335	2.07	3863	26565	2.00	3901	25795	1.92	3940	24640	1.80	4019
	15°F	13°F	28875	2.11	4013	28105	2.03	4053	27335	1.96	4093	26180	1.84	4175
	17°F	15°F	30415	2.20	4050	29645	2.12	4091	28875	2.05	4131	27720	1.93	4214
	20°F	17°F	31570	2.33	3975	30800	2.25	4015	30030	2.17	4055	28875	2.05	4136
	25°F	22°F	32725	2.44	3938	31955	2.35	3977	31185	2.28	4017	30030	2.15	4097
	30°F	27°F	33495	2.52	3900	32725	2.43	3939	31955	2.35	3978	30800	2.22	4058
	35°F	33°F	34265	2.60	3863	33495	2.52	3901	32725	2.43	3940	31570	2.30	4019
	40°F	36°F	36190	2.77	3825	35420	2.69	3863	34650	2.60	3902	33495	2.47	3980
	45°F	41°F	37345	2.89	3788	36575	2.80	3825	35805	2.72	3864	34650	2.58	3941
	47°F	43°F	38500	3.01	3750	37730	2.92	3788	36960	2.83	3825	35805	2.69	3902
	50°F	46°F	39270	3.04	3788	38500	2.95	3825	37730	2.86	3864	36575	2.72	3941
	55°F	50°F	40040	3.07	3825	39270	2.98	3863	38500	2.89	3902	37345	2.75	3980
60°F	55°F	40810	3.10	3863	40040	3.01	3901	39270	2.92	3940	38115	2.78	4019	
65°F	60°F	41580	3.12	3900	40810	3.04	3939	40040	2.95	3978	38885	2.81	4058	
70°F	64°F	39655	3.26	3563	38885	3.17	3598	38115	3.07	3634	36960	2.92	3707	
75°F	69°F	36575	4.08	2625	35805	3.96	2651	35035	3.83	2678	33880	3.64	2731	
80°F	74°F													
86°F	80°F													

*Maximum Output values are not based on AHRI test conditions

LEGEND: W - Watts

DB - Dry Bulb

TC - Total Capacity

SC - Total Capacity

SHR - Sensible Heat Ratio

COP - Coefficient of Performance



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