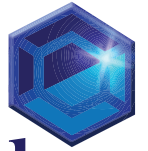




Air comfort for all



sapphire



Indoor Unit

MODELS:

SAP09HP230V1AH
SAP12HP230V1AH
SAP18HP230V1AH
SAP24HP230V1AH

Outdoor Unit

MODELS:

SAP09HP230V1AO
SAP12HP230V1AO
SAP18HP230V1AO
SAP24HP230V1AO

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/>

EXTENDED RATINGS

SAP09HP230V1AH / SAP09HP230V1AO

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	8428	6174	73%	9.20	916	8947	6554	73%	9.28	964	9206	6744	73%	9.07	1015	9984	7313	73%	8.92	1119
	5°F	8558	6290	74%	9.15	935	9076	6671	74%	9.22	984	9336	6862	74%	9.01	1036	10113	7433	74%	8.85	1142
	10°F	8752	6455	74%	9.17	954	9271	6838	74%	9.23	1004	9530	7029	74%	9.02	1057	10308	7603	74%	8.85	1165
	15°F	8947	6620	74%	9.20	973	9465	7004	74%	9.24	1024	9725	7196	74%	9.02	1078	10502	7772	74%	8.84	1188
	20°F	9076	6739	74%	9.15	992	9595	7124	74%	9.19	1044	9854	7317	74%	8.97	1099	10632	7895	74%	8.77	1212
	25°F	9206	6858	75%	9.11	1011	9725	7245	74%	9.14	1064	9984	7438	75%	8.91	1120	10762	8018	75%	8.72	1235
	30°F	9530	7124	75%	9.25	1030	10049	7512	75%	9.27	1084	10308	7706	75%	9.03	1141	11086	8288	75%	8.81	1258
	35°F	9854	7391	75%	9.40	1049	10373	7780	75%	9.40	1104	10632	7974	75%	9.15	1162	11410	8558	75%	8.91	1281
	40°F	10049	7562	75%	9.41	1068	10567	7952	75%	9.40	1124	10827	8148	75%	9.15	1183	11605	8733	75%	8.90	1304
	45°F	10243	7734	75%	9.43	1087	10762	8125	75%	9.41	1144	11021	8321	75%	9.15	1204	11799	8908	76%	8.89	1327
	50°F	10567	8006	76%	9.56	1106	11086	8398	76%	9.53	1164	11345	8595	76%	9.26	1225	12123	9184	76%	8.98	1351
	55°F	10891	8277	76%	9.69	1125	11410	8672	76%	9.64	1184	11669	8869	76%	9.37	1246	12447	9460	76%	9.06	1374
	60°F	11216	8553	76%	9.81	1143	11734	8948	76%	9.75	1204	11994	9146	76%	9.47	1267	12772	9739	76%	9.14	1397
	65°F	11540	8828	76%	9.93	1162	12058	9225	76%	9.85	1224	12318	9423	76%	9.56	1288	13096	10018	77%	9.22	1420
	70°F	12058	9256	77%	10.21	1181	12577	9654	77%	10.11	1244	12836	9853	77%	9.81	1309	13614	10450	77%	9.43	1443
	75°F	12577	9684	77%	10.48	1200	13096	10084	77%	10.36	1264	13355	10283	77%	10.04	1330	14133	10882	77%	9.64	1466
80°F	12772	9866	77%	10.47	1219	13290	10267	77%	10.36	1283	13549	10467	77%	10.03	1351	14327	11068	77%	9.62	1489	
85°F	12966	10049	78%	10.47	1238	13485	10451	78%	10.35	1303	13744	10652	78%	10.02	1372	14522	11254	78%	9.60	1513	
90°F	12577	9778	78%	10.05	1251	13096	10181	78%	9.95	1317	13355	10383	78%	9.64	1386	14133	10987	78%	9.25	1528	
95°F	12188	9507	78%	9.65	1264	12707	9911	78%	9.55	1330	12966	10113	78%	9.26	1400	13744	10720	78%	8.90	1544	
100°F	11864	9283	78%	9.16	1295	12383	9689	78%	9.08	1363	12642	9891	78%	8.81	1435	13420	10500	78%	8.48	1582	
105°F	11540	9059	79%	8.70	1327	12058	9466	79%	8.63	1397	12318	9669	78%	8.38	1470	13096	10280	79%	8.08	1621	
110°F	11345	8934	79%	8.35	1358	11864	9342	79%	8.30	1430	12123	9547	79%	8.06	1505	12901	10159	79%	7.78	1659	
115°F	11151	8809	79%	8.02	1390	11669	9219	79%	7.98	1463	11929	9424	79%	7.75	1540	12707	10038	79%	7.48	1698	
120°F	10697	8476	79%	7.67	1395	11216	8887	79%	7.50	1496	11475	9093	79%	7.29	1575	12253	9709	79%	7.06	1736	
122°F	10243	8143	80%	7.32	1400	10762	8556	80%	7.04	1530	11021	8762	79%	6.85	1610	11799	9380	80%	6.65	1775	
125°F	9919	7910	80%	7.05	1407	10438	8323	80%	6.80	1535	10697	8530	80%	6.50	1645	11475	9150	80%	6.33	1814	
129°F	9595	7676	80%	6.79	1414	10113	8091	80%	6.57	1540	10373	8298	80%	6.17	1680	11151	8921	80%	6.02	1852	

*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

SAP09HP230V1AH / SAP09HP230V1AO

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	7506	1.87	1177	7233	1.77	1201	6961	1.67	1225	6688	1.57	1249
	-20°F	-20.5°F	7711	1.90	1189	7438	1.80	1213	7165	1.70	1237	6892	1.60	1262
	-15°F	-16°F	7916	1.93	1201	7643	1.83	1225	7370	1.73	1250	7097	1.63	1275
	-10°F	-11°F	8394	2.03	1213	8121	1.92	1238	7848	1.82	1262	7575	1.72	1288
	-5°F	-6°F	8871	2.12	1226	8598	2.02	1250	8325	1.91	1275	8052	1.81	1301
	0°F	-1°F	9281	2.17	1251	9008	2.07	1276	8735	1.97	1301	8462	1.87	1327
	5°F	3°F	9690	2.23	1276	9417	2.12	1302	9144	2.02	1328	8871	1.92	1354
	10°F	8°F	10236	2.30	1302	9963	2.20	1328	9690	2.10	1355	9417	2.00	1382
	15°F	13°F	10441	2.33	1315	10441	2.28	1342	10168	2.18	1369	9895	2.08	1396
	17°F	15°F	10645	2.35	1329	10918	2.36	1355	10645	2.26	1382	10373	2.16	1410
	20°F	17°F	11191	2.42	1356	10918	2.31	1383	10645	2.21	1411	10373	2.11	1439
	25°F	22°F	11601	2.46	1384	11328	2.35	1411	11055	2.25	1439	10782	2.15	1468
	30°F	27°F	11806	2.48	1398	11533	2.37	1426	11260	2.27	1454	10987	2.17	1483
	35°F	33°F	12010	2.49	1412	11737	2.39	1440	11464	2.29	1469	11191	2.19	1498
	40°F	36°F	12966	2.64	1441	12693	2.53	1469	12420	2.43	1499	12147	2.33	1529
	45°F	41°F	13375	2.67	1470	13102	2.56	1499	12829	2.46	1529	12556	2.36	1560
	47°F	43°F	13648	2.67	1500	13375	2.56	1530	13102	2.46	1561	12829	2.36	1592
	50°F	46°F	13512	2.63	1508	13239	2.52	1538	12966	2.42	1568	12693	2.33	1600
	55°F	50°F	13375	2.59	1515	13102	2.48	1545	12829	2.39	1576	12556	2.29	1608
60°F	55°F	13239	2.54	1530	12966	2.43	1561	12693	2.34	1592	12420	2.24	1624	
65°F	60°F	12966	2.59	1470	12693	2.48	1499	12420	2.38	1529	12147	2.28	1560	
70°F	64°F	12829	2.58	1463	12556	2.47	1492	12283	2.37	1522	12010	2.27	1552	
75°F	69°F	12693	2.56	1455	12420	2.45	1484	12147	2.35	1514	11874	2.25	1544	
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	9980	7310	73%	10.17	981	10594	7760	73%	10.25	1033	10901	7985	73%	10.02	1088	11823	8660	73%	9.86	1199
	5°F	10134	7448	74%	10.12	1002	10748	7900	73%	10.19	1055	11055	8125	74%	9.96	1110	11976	8802	74%	9.79	1224
	10°F	10364	7643	74%	10.14	1022	10978	8096	74%	10.20	1076	11285	8323	74%	9.96	1133	12206	9002	74%	9.78	1249
	15°F	10594	7840	74%	10.16	1042	11208	8294	74%	10.22	1097	11516	8521	74%	9.97	1155	12437	9203	74%	9.77	1273
	20°F	10748	7980	74%	10.11	1063	11362	8436	74%	10.16	1119	11669	8664	74%	9.91	1178	12590	9348	74%	9.70	1298
	25°F	10901	8122	75%	10.07	1083	11516	8579	75%	10.10	1140	11823	8808	74%	9.85	1200	12744	9494	75%	9.63	1323
	30°F	11285	8436	75%	10.23	1103	11899	8895	75%	10.25	1161	12206	9124	75%	9.98	1223	13128	9813	75%	9.74	1348
	35°F	11669	8752	75%	10.39	1124	12283	9212	75%	10.39	1183	12590	9443	75%	10.11	1245	13512	10134	75%	9.84	1373
	40°F	11899	8954	75%	10.40	1144	12514	9416	75%	10.39	1204	12821	9647	75%	10.11	1268	13742	10341	75%	9.83	1397
	45°F	12130	9158	75%	10.42	1164	12744	9622	75%	10.40	1226	13051	9853	76%	10.12	1290	13972	10549	76%	9.82	1422
	50°F	12514	9479	76%	10.56	1185	13128	9944	76%	10.53	1247	13435	10177	76%	10.24	1313	14356	10875	76%	9.92	1447
	55°F	12897	9802	76%	10.70	1205	13512	10269	76%	10.65	1268	13819	10502	76%	10.35	1335	14740	11202	76%	10.01	1472
	60°F	13281	10127	76%	10.84	1225	13895	10595	76%	10.77	1290	14202	10829	76%	10.46	1358	15124	11532	76%	10.11	1497
	65°F	13665	10454	76%	10.97	1245	14279	10924	76%	10.89	1311	14586	11159	77%	10.57	1380	15508	11863	77%	10.19	1521
	70°F	14279	10959	77%	11.28	1266	14893	11431	77%	11.18	1332	15200	11666	77%	10.84	1403	16122	12373	77%	10.43	1546
	75°F	14893	11468	77%	11.58	1286	15508	11941	77%	11.46	1354	15815	12177	77%	11.10	1425	16736	12887	77%	10.65	1571
	80°F	15124	11683	77%	11.58	1306	15738	12157	77%	11.44	1375	16045	12395	77%	11.08	1448	16966	13106	77%	10.63	1596
85°F	15354	11899	78%	11.57	1327	15968	12375	77%	11.43	1397	16275	12613	77%	11.07	1470	17196	13327	77%	10.61	1621	
90°F	14893	11580	78%	11.11	1340	15508	12057	78%	10.99	1411	15815	12296	78%	10.65	1485	16736	13012	78%	10.22	1637	
95°F	14433	11258	78%	10.66	1354	15047	11737	78%	10.56	1425	15354	11976	78%	10.24	1500	16275	12695	78%	9.84	1654	
100°F	14049	10993	78%	10.12	1388	14663	11474	78%	10.04	1461	14970	11714	78%	9.74	1538	15891	12435	78%	9.37	1695	
105°F	13665	10727	78%	9.61	1421	14279	11209	79%	9.54	1496	14586	11450	79%	9.26	1575	15508	12173	79%	8.93	1736	
110°F	13435	10580	79%	9.23	1455	14049	11064	79%	9.17	1532	14356	11305	79%	8.90	1613	15277	12031	79%	8.59	1778	
115°F	13204	10432	79%	8.87	1489	13819	10917	79%	8.82	1568	14126	11159	79%	8.56	1650	15047	11887	79%	8.27	1819	
120°F	12667	10039	79%	8.48	1495	13281	10525	79%	8.28	1603	13588	10769	79%	8.05	1688	14510	11499	79%	7.80	1860	
122°F	12130	9643	80%	8.09	1500	12744	10131	80%	7.78	1639	13051	10375	80%	7.57	1725	13972	11108	79%	7.35	1902	
125°F	11746	9367	80%	7.79	1508	12360	9857	80%	7.52	1644	12667	10102	80%	7.19	1763	13588	10837	80%	6.99	1943	
129°F	11362	9090	80%	7.50	1515	11976	9581	80%	7.26	1650	12283	9827	80%	6.82	1800	13204	10564	80%	6.65	1985	

*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

SAP12HP230V1AH / SAP12HP230V1AO

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	10321	2.49	1216	9946	2.35	1241	9571	2.22	1265	9195	2.09	1291
	-20°F	-20.5°F	10603	2.53	1229	10228	2.39	1253	9852	2.26	1278	9477	2.13	1304
	-15°F	-16°F	10884	2.57	1241	10509	2.43	1266	10134	2.30	1291	9758	2.17	1317
	-10°F	-11°F	11541	2.70	1254	11166	2.56	1279	10790	2.42	1304	10415	2.29	1331
	-5°F	-6°F	12198	2.82	1266	11823	2.68	1292	11447	2.55	1318	11072	2.41	1344
	0°F	-1°F	12761	2.89	1292	12386	2.75	1318	12010	2.62	1345	11635	2.49	1371
	5°F	3°F	13324	2.96	1319	12949	2.82	1345	12573	2.69	1372	12198	2.56	1399
	10°F	8°F	14075	3.07	1346	13699	2.92	1373	13324	2.79	1400	12949	2.66	1428
	15°F	13°F	14356	3.10	1359	14356	3.03	1387	13981	2.90	1414	13605	2.76	1443
	17°F	15°F	14638	3.12	1373	15013	3.14	1401	14638	3.00	1429	14262	2.87	1457
	20°F	17°F	15388	3.22	1401	15013	3.08	1429	14638	2.94	1458	14262	2.81	1487
	25°F	22°F	15951	3.27	1430	15576	3.13	1458	15201	3.00	1487	14825	2.86	1517
	30°F	27°F	16233	3.29	1444	15857	3.15	1473	15482	3.02	1503	15107	2.89	1533
	35°F	33°F	16514	3.32	1459	16139	3.18	1488	15763	3.04	1518	15388	2.91	1548
	40°F	36°F	17828	3.51	1489	17452	3.37	1518	17077	3.23	1549	16702	3.10	1580
	45°F	41°F	18391	3.55	1519	18015	3.41	1549	17640	3.27	1580	17265	3.14	1612
	47°F	43°F	18766	3.55	1550	18391	3.41	1581	18015	3.27	1613	17640	3.14	1645
	50°F	46°F	18578	3.50	1558	18203	3.36	1589	17828	3.22	1621	17452	3.09	1653
	55°F	50°F	18391	3.44	1566	18015	3.31	1597	17640	3.17	1629	17265	3.05	1661
60°F	55°F	18203	3.37	1581	17828	3.24	1613	17452	3.11	1645	17077	2.98	1678	
65°F	60°F	17828	3.44	1519	17452	3.30	1549	17077	3.17	1580	16702	3.04	1612	
70°F	64°F	17640	3.42	1511	17265	3.28	1541	16889	3.15	1572	16514	3.02	1604	
75°F	69°F	17452	3.40	1504	17077	3.26	1534	16702	3.13	1564	16326	3.00	1596	
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

SAP18HP230V1AH / SAP18HP230V1AO

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	12091	8464	70%	10.09	1198	12465	8975	72%	10.20	1222	12784	9333	73%	10.25	1247	13679	10123	74%	10.44	1310
		5°F	12465	8850	71%	10.20	1222	12850	9381	73%	10.30	1247	13180	9753	74%	10.36	1273	14102	10577	75%	10.55	1336
		10°F	12850	9124	71%	10.30	1247	13248	9671	73%	10.41	1273	13587	10055	74%	10.46	1299	14538	10904	75%	10.66	1364
		15°F	13248	9406	71%	10.41	1273	13657	9970	73%	10.52	1299	14008	10366	74%	10.57	1325	14988	11241	75%	10.77	1392
		20°F	13657	9697	71%	10.52	1299	14080	10278	73%	10.62	1325	14441	10686	74%	10.68	1352	15452	11589	75%	10.88	1420
		25°F	14080	10137	72%	10.62	1325	14515	10741	74%	10.73	1352	14887	11166	75%	10.79	1380	15930	12106	76%	10.99	1449
		30°F	14515	10451	72%	10.73	1352	14964	11073	74%	10.84	1380	15348	11511	75%	10.90	1408	16422	12481	76%	11.11	1478
		35°F	14964	10774	72%	10.84	1380	15427	11416	74%	10.96	1408	15822	11867	75%	11.01	1437	16930	12867	76%	11.22	1509
		40°F	15427	11107	72%	10.96	1408	15904	11769	74%	11.07	1437	16312	12234	75%	11.13	1466	17454	13265	76%	11.34	1539
		45°F	15904	11610	73%	11.07	1437	16396	12297	75%	11.18	1466	16816	12780	76%	11.24	1496	17993	13855	77%	11.45	1571
		50°F	16396	11969	73%	11.18	1466	16903	12677	75%	11.30	1496	17336	13176	76%	11.36	1527	18550	14283	77%	11.57	1603
		55°F	16903	12339	73%	11.30	1496	17426	13069	75%	11.41	1527	17873	13583	76%	11.47	1558	19124	14725	77%	11.69	1636
		60°F	17426	12721	73%	11.41	1527	17965	13474	75%	11.53	1558	18425	14003	76%	11.59	1590	19715	15181	77%	11.81	1669
		65°F	18941	14016	74%	11.54	1641	19527	14840	76%	11.66	1675	20028	15421	77%	11.72	1709	21430	16715	78%	11.94	1795
		70°F	19328	14302	74%	11.66	1658	19925	15143	76%	11.78	1692	20436	15736	77%	11.84	1726	21867	17056	78%	12.06	1813
		75°F	19722	14594	74%	11.78	1675	20332	15452	76%	11.90	1709	20853	16057	77%	11.96	1744	22313	17404	78%	12.19	1831
80°F	21913	16216	74%	11.91	1840	22591	17169	76%	12.03	1878	23170	17841	77%	12.09	1916	24792	19338	78%	12.32	2012		
85°F	21484	16113	75%	11.56	1859	22148	17054	77%	11.68	1897	22716	17719	78%	11.74	1936	24306	19202	79%	11.96	2032		
90°F	21062	15797	75%	11.22	1878	21714	16720	77%	11.33	1916	22271	17371	78%	11.39	1955	23830	18825	79%	11.61	2053		
95°F	20650	15487	75%	10.89	1897	21288	16392	77%	11.00	1936	21834	17031	78%	11.06	1975	23362	18456	79%	11.27	2074		
100°F	20133	15100	75%	10.46	1925	20756	15982	77%	10.57	1965	21288	16605	78%	10.62	2005	22778	17995	79%	10.82	2105		
105°F	19831	15468	78%	10.00	1983	20445	16356	80%	10.10	2023	20969	16985	81%	10.16	2065	22437	18398	82%	10.35	2168		
110°F	19634	15314	78%	9.60	2046	20241	16193	80%	9.70	2087	20760	16816	81%	9.75	2130	22213	18215	82%	9.93	2237		
115°F	18063	14089	78%	8.41	2148	18622	14897	80%	8.50	2192	19099	15470	81%	8.54	2237	20436	16758	82%	8.70	2348		
120°F	17341	13526	78%	7.95	2180	17877	14301	80%	8.04	2225	18335	14852	81%	8.08	2270	19619	16087	82%	8.23	2384		
122°F	14046	11096	79%	7.58	1853	14480	11729	81%	7.66	1891	14852	12178	82%	7.70	1930	15891	13190	83%	7.84	2026		
125°F	13484	10652	79%	7.13	1890	13901	11260	81%	7.21	1929	14257	11691	82%	7.24	1968	15255	12662	83%	7.38	2067		
129°F	11461	9055	79%	6.59	1739	11816	9571	81%	6.66	1774	12119	9937	82%	6.69	1811	12967	10763	83%	6.82	1901		

*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

SAP18HP230V1AH / SAP18HP230V1AO

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	13346	1.77	2206	13012	1.70	2250	12622	1.61	2295	12117	1.52	2341
	-20°F	-20.5°F	14506	1.81	2346	14144	1.73	2393	13719	1.65	2441	13171	1.55	2490
	-15°F	-16°F	15768	1.85	2496	15374	1.77	2546	14912	1.68	2597	14316	1.58	2649
	-10°F	-11°F	17139	1.89	2656	16710	1.81	2709	16209	1.72	2763	15561	1.62	2818
	-5°F	-6°F	18429	1.93	2795	17968	1.85	2851	17429	1.76	2908	16732	1.65	2966
	0°F	-1°F	19605	1.95	2942	19115	1.87	3001	18542	1.78	3061	17800	1.67	3122
	5°F	3°F	20637	1.97	3065	20121	1.89	3126	19517	1.79	3189	18737	1.69	3253
	10°F	8°F	20900	2.03	3018	20378	1.94	3079	19767	1.84	3140	18976	1.74	3203
	15°F	13°F	21345	2.09	2988	20811	2.00	3048	20187	1.90	3109	19380	1.79	3171
	17°F	15°F	21790	2.16	2959	21245	2.06	3018	20608	1.96	3078	19783	1.85	3140
	20°F	17°F	22234	2.24	2915	21679	2.14	2973	21028	2.03	3033	20187	1.91	3093
	25°F	22°F	22347	2.30	2851	21788	2.20	2908	21134	2.09	2966	20289	1.97	3025
	30°F	27°F	22459	2.36	2795	21898	2.25	2851	21241	2.14	2908	20391	2.01	2966
	35°F	33°F	23114	2.47	2739	22536	2.36	2794	21860	2.25	2850	20986	2.12	2907
	40°F	36°F	23829	3.38	2066	23233	3.23	2107	22536	3.07	2150	21635	2.89	2193
	45°F	41°F	24566	3.45	2087	23952	3.30	2129	23233	3.14	2171	22304	2.95	2215
47°F	43°F	24934	3.47	2108	24311	3.31	2150	23582	3.15	2193	22639	2.97	2237	
50°F	46°F	19948	3.56	1644	19449	3.40	1677	18865	3.23	1711	18111	3.04	1745	
55°F	50°F	19549	3.52	1628	19060	3.36	1660	18488	3.20	1693	17749	3.01	1727	
60°F	55°F	15052	3.43	1286	14676	3.28	1312	14236	3.12	1338	13666	2.94	1365	
65°F	60°F	14601	3.40	1260	14236	3.25	1285	13809	3.09	1311	13256	2.91	1337	
70°F	64°F	14163	3.36	1235	13809	3.21	1260	13395	3.06	1285	12859	2.88	1311	
75°F	69°F	13596	3.29	1210	13256	3.15	1234	12859	2.99	1259	12344	2.82	1284	
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(Btu/(h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER(Btu/(h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER(Btu/(h·W))	Power Input (W)
-20°F																				
-15°F																				
-10°F																				
-5°F																				
0°F	19963	14624	73%	9.49	2104	21191	15523	73%	9.57	2215	21806	15973	73%	9.35	2332	23648	17323	73%	9.46	2499
5°F	20270	14898	74%	9.44	2148	21498	15801	74%	9.51	2261	22113	16253	74%	9.29	2380	23955	17607	74%	9.39	2551
10°F	20731	15290	74%	9.46	2191	21959	16196	74%	9.52	2307	22573	16649	74%	9.30	2428	24416	18008	74%	9.38	2603
15°F	21191	15682	74%	9.48	2235	22420	16591	74%	9.53	2353	23034	17045	74%	9.30	2476	24877	18409	74%	9.37	2654
20°F	21498	15963	74%	9.44	2278	22727	16875	74%	9.48	2398	23341	17332	74%	9.25	2525	25184	18700	74%	9.31	2706
25°F	21806	16245	75%	9.39	2322	23034	17160	74%	9.42	2444	23648	17618	74%	9.19	2573	25491	18991	75%	9.24	2758
30°F	22573	16875	75%	9.54	2365	23802	17794	75%	9.56	2490	24416	18253	75%	9.32	2621	26259	19630	75%	9.35	2809
35°F	23341	17506	75%	9.69	2409	24570	18427	75%	9.69	2536	25184	18888	75%	9.43	2669	27027	20270	75%	9.45	2861
40°F	23802	17912	75%	9.70	2453	25030	18836	75%	9.70	2582	25645	19299	75%	9.44	2718	27487	20685	75%	9.44	2913
45°F	24262	18318	75%	9.72	2496	25491	19246	75%	9.70	2627	26105	19709	75%	9.44	2766	27948	21101	76%	9.43	2965
50°F	25030	18962	76%	9.86	2540	26259	19893	76%	9.82	2673	26873	20358	76%	9.55	2814	28716	21754	76%	9.52	3016
55°F	25798	19607	76%	9.99	2583	27027	20540	76%	9.94	2719	27641	21007	76%	9.66	2862	29484	22407	76%	9.61	3068
60°F	26566	20258	76%	10.11	2627	27794	21195	76%	10.05	2765	28409	21664	76%	9.76	2910	30251	23069	76%	9.70	3120
65°F	27334	20910	76%	10.24	2670	28562	21850	76%	10.16	2811	29176	22320	76%	9.86	2959	31019	23730	77%	9.78	3171
70°F	28562	21925	77%	10.52	2714	29791	22867	77%	10.43	2857	30405	23339	77%	10.11	3007	32248	24753	77%	10.01	3223
75°F	29791	22939	77%	10.80	2757	31019	23885	77%	10.69	2902	31633	24358	77%	10.35	3055	33476	25777	77%	10.22	3275
80°F	30251	23370	77%	10.80	2801	31480	24319	77%	10.68	2948	32094	24794	77%	10.34	3103	33937	26217	77%	10.20	3326
85°F	30712	23802	78%	10.80	2844	31940	24754	78%	10.67	2994	32555	25230	78%	10.33	3152	34397	26658	78%	10.18	3378
90°F	29791	23160	78%	10.37	2873	31019	24115	78%	10.26	3025	31633	24593	78%	9.94	3184	33476	26025	78%	9.81	3413
95°F	28869	22518	78%	9.95	2902	30098	23476	78%	9.85	3055	30712	23955	78%	9.55	3216	32555	25393	78%	9.44	3447
100°F	28101	21987	78%	9.45	2975	29330	22949	78%	9.37	3132	29944	23429	78%	9.08	3296	31787	24871	78%	9.00	3533
105°F	27334	21457	79%	8.97	3048	28562	22421	79%	8.90	3208	29176	22903	79%	8.64	3377	31019	24350	79%	8.57	3620
110°F	26873	21161	79%	8.61	3120	28101	22129	79%	8.56	3284	28716	22612	79%	8.31	3457	30558	24064	79%	8.25	3706
115°F	26412	20866	79%	8.27	3193	27641	21836	79%	8.22	3361	28255	22321	79%	7.99	3538	30098	23777	79%	7.94	3792
120°F	25337	20077	79%	7.91	3204	26566	21051	79%	7.73	3437	27180	21538	79%	7.51	3618	29023	22998	79%	7.48	3878
122°F	24262	19289	80%	7.54	3216	25491	20265	80%	7.26	3513	26105	20754	80%	7.06	3698	27948	22219	80%	7.05	3964
125°F	23495	18735	80%	7.27	3232	24723	19715	80%	7.01	3526	25337	20205	80%	6.71	3779	27180	21674	80%	6.71	4050
129°F	22727	18181	80%	7.00	3248	23955	19164	80%	6.77	3538	24570	19656	80%	6.37	3859	26412	21130	80%	6.39	4137

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

SAP24HP230V1AH / SAP24HP230V1AO

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)
DB	WB												
-22°F	-22.5°F	18339	1.97	2724	17672	1.86	2778	17005	1.76	2834	16338	1.66	2890
-20°F	-20.5°F	18839	2.01	2751	18172	1.90	2806	17506	1.79	2863	16839	1.69	2920
-15°F	-16°F	19339	2.04	2779	18673	1.93	2835	18006	1.83	2892	17339	1.72	2949
-10°F	-11°F	20506	2.14	2808	19840	2.03	2864	19173	1.92	2921	18506	1.82	2979
-5°F	-6°F	21674	2.24	2836	21007	2.13	2893	20340	2.02	2951	19673	1.92	3010
0°F	-1°F	22674	2.30	2894	22007	2.19	2952	21340	2.08	3011	20673	1.97	3071
5°F	3°F	23674	2.35	2953	23007	2.24	3012	22341	2.13	3072	21674	2.03	3134
10°F	8°F	25008	2.43	3013	24341	2.32	3073	23674	2.21	3135	23007	2.11	3198
15°F	13°F	25508	2.46	3044	25508	2.41	3105	24841	2.30	3167	24174	2.19	3230
17°F	15°F	26008	2.48	3075	26675	2.49	3136	26008	2.38	3199	25341	2.28	3263
20°F	17°F	27342	2.55	3137	26675	2.44	3200	26008	2.34	3264	25341	2.23	3329
25°F	22°F	28342	2.59	3201	27675	2.48	3265	27009	2.38	3331	26342	2.27	3397
30°F	27°F	28842	2.61	3234	28176	2.50	3299	27509	2.40	3365	26842	2.29	3432
35°F	33°F	29343	2.63	3267	28676	2.52	3332	28009	2.42	3399	27342	2.31	3467
40°F	36°F	31677	2.79	3333	31010	2.67	3400	30343	2.56	3468	29676	2.46	3537
45°F	41°F	32677	2.82	3401	32010	2.70	3469	31343	2.60	3539	30677	2.49	3610
47°F	43°F	33344	2.82	3471	32677	2.71	3540	32010	2.60	3612	31343	2.49	3683
50°F	46°F	33010	2.77	3488	32344	2.66	3558	31677	2.56	3629	31010	2.46	3702
55°F	50°F	32677	2.73	3506	32010	2.62	3576	31343	2.52	3647	30677	2.42	3720
60°F	55°F	32344	2.68	3540	31677	2.57	3611	31010	2.47	3683	30343	2.37	3757
65°F	60°F	31677	2.73	3401	31010	2.62	3469	30343	2.51	3539	29676	2.41	3610
70°F	64°F	31343	2.71	3384	30676	2.60	3452	30010	2.50	3521	29343	2.39	3591
75°F	69°F	31010	2.70	3367	30343	2.59	3434	29676	2.48	3503	29009	2.38	3573
80°F	74°F												
86°F	80°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



Specifications are subject to change without notice. Manufacturer reserves the right to discontinue or modify specifications or designs without notice or without incurring obligations. All Rights reserved.

GREECOMFORT.COM/SYSTEM-DOCUMENTATION