

ComfortStar®

Air Conditioning & Heating Products

eco
smart series™

CH20-32 Series Performance Data



CH20-32 SERIES | PERFORMANCE DATA

Cooling and heating capacity by outdoor and indoor coil-air conditions.

9K | 115V

PERFORMANCE DATA

9K-115V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	4640	3619	5004	3853	5104	3992	6302	3844
14	-10	4341	3386	4688	3657	4688	3708	5934	3620
23	-5	4130	3222	4478	3448	4254	3348	5672	3460
33.8	1	4755	3709	5109	3934	4802	3784	6489	3958
53.6	12	4947	3809	5352	4121	6530	4897	6802	4149
68	20	7019	4703	7569	4996	7721	5227	9532	4957
77	25	7944	5323	8574	5659	8659	5862	10824	5629
86	30	8386	6541	9031	5960	9392	6359	11454	5956
95	35	7348	4923	7918	5226	9185	6218	9984	5192
109.4	43	5611	4209	6037	4467	7968	6024	7662	4520
118.4	48	5674	4256	6117	4588	7830	5951	7752	4574
131	55	3248	3216	3502	3432	4028	4024	4426	3452

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

9K-115V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC
-13	-25	4643	4133	4086			
-4	-20	5899	4837	4778			
0	-18	6574	5588	5456			
5	-15	7026	6253	6183			
17	-8	7774	6608	6530			
24.8	-4	8229	6995	6830			
32	0	8747	7348	7260			
35	1.7	8945	7603	7424			
39.2	4	9812	8046	7850			
47	8	10908	9272	9054			
53.6	12	11693	9822	9589			
57	14	11872	9735	9498			

*Total Capacity (BtuH)

9K | 230V

PERFORMANCE DATA

9K-230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	4571	3566	4930	3796	5028	3932	6208	3787
14	-10	4276	3335	4618	3602	4618	3653	5846	3566
23	-5	4069	3174	4412	3397	4191	3298	5588	3409
33.8	1	4684	3653	5053	3875	4731	3728	6393	3900
53.6	12	4873	3752	5273	4060	6433	4824	6701	4087
68	20	6915	4633	7457	4922	7606	5149	9390	4883
77	25	7826	5244	8446	5575	8531	5775	10663	5545
86	30	8261	6444	8897	5872	9253	6264	11284	5868
95	35	7239	4850	7801	5148	9049	6126	9835	5114
109.4	43	5528	4146	5947	4401	7850	5935	7548	4453
118.4	48	5589	4192	6026	4520	7713	5862	7637	4506
131	55	3200	3168	3450	3381	3968	3964	4360	3401

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

9K-230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC
-13	-25	4529	4031	3985			
-4	-20	5753	4717	4660			
0	-18	6411	5450	5321			
5	-15	6852	6099	6030			
17	-8	7582	6444	6368			
24.8	-4	8026	6822	6661			
32	0	8531	7166	7081			
35	1.7	8724	7415	7241			
39.2	4	9570	7847	7656			
47	8	10639	9043	8830			
53.6	12	11404	9580	9352			
57	14	11579	9495	9263			

*Total Capacity (BtuH)

12K | 115V

PERFORMANCE DATA

12K-115V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	6761	5698	7263	6062	8097	6865	9182	6076
14	-10	6648	5603	7142	5961	7962	6751	9028	5974
23	-5	6422	5413	6899	5758	7691	6521	8722	5771
33.8	1	6696	5643	7193	6004	8019	6799	9094	6017
53.6	12	8793	7411	9446	7884	10531	8929	11942	7902
68	20	9185	7742	9867	8236	11001	9327	12475	8255
77	25	9603	8094	10316	8611	11501	9752	13042	8630
86	30	10191	8589	10947	9137	12204	10348	13840	9158
95	35	10496	8846	11275	9411	12570	10658	14254	9432
109.4	43	10860	9153	11666	9737	13006	11027	14748	9759
118.4	48	10450	8808	11226	9370	12515	10612	14192	9391
131	55	4971	4190	5340	4457	5953	5048	6751	4467

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC
-13	-25	4928	4854	4759			
-4	-20	6084	5992	5874			
0	-18	6497	6399	6273			
5	-15	7099	6992	6855			
17	-8	8214	8090	7931			
24.8	-4	8775	8643	8473			
32	0	9283	9142	8963			
35	1.7	9492	9348	9165			
39.2	4	10854	10690	10480			
47	8	12805	12612	12364			
53.6	12	13203	13004	12748			
57	14	13349	13147	12889			

*Total Capacity (BtuH)

CH20-32 SERIES

PERFORMANCE DATA

Capacity tables by model

12K | 230V

PERFORMANCE DATA

12K-230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	6860	5782	7369	6151	8215	6966	9316	6165
14	-10	6745	5685	7246	6048	8078	6849	9161	6062
23	-5	6516	5492	7000	5843	7804	6617	8850	5856
33.8	1	6794	5726	7299	6092	8137	6899	9227	6106
53.6	12	8922	7520	9585	8000	10685	9060	12117	8018
68	20	9320	7855	10012	8357	11162	9464	12657	8376
77	25	9744	8212	10468	8737	11670	9895	13233	8757
86	30	10340	8715	11108	9271	12383	10500	14043	9292
95	35	10650	8976	11440	9549	12754	10814	14463	9570
109.4	43	11019	9287	11837	9880	13196	11189	14965	9902
118.4	48	10604	8937	11391	9507	12699	10767	14400	9529
131	55	5044	4251	5419	4523	6041	5122	6850	4533

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

12K-230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC		
-13	-25	4647	4577	4487			
-4	-20	5737	5650	5539			
0	-18	6126	6034	5915			
5	-15	6694	6593	6463			
17	-8	7745	7628	7478			
24.8	-4	8274	8149	7989			
32	0	8753	8621	8451			
35	1.7	8950	8815	8642			
39.2	4	10234	10080	9882			
47	8	12074	11892	11659			
53.6	12	12450	12262	12021			
57	14	12587	12397	12153			

*Total Capacity (BtuH)

18K | 230V

PERFORMANCE DATA

18K230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	12095	9556	13000	10171	14590	11597	16458	10194
14	-10	12389	9789	13316	10418	14945	11879	16858	10442
23	-5	12539	9907	13477	10544	15126	12023	17062	10568
33.8	1	14099	11139	15153	11856	17007	13518	19184	11883
53.6	12	12649	9993	13595	10636	15258	12128	17211	10661
68	20	13135	10378	14117	11045	15844	12594	17872	11070
77	25	13633	10771	14653	11464	16446	13072	18551	11490
86	30	14362	11347	15437	12077	17325	13771	19543	12105
95	35	14731	11639	15833	12387	17770	14125	20044	12415
109.4	43	15203	12011	16340	12784	18339	14577	20686	12813
118.4	48	14629	11558	15723	12302	17647	14027	19906	12330
131	55	5955	4705	6401	5008	7184	5710	8103	5019

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

18K

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC
-13	-25	7817	7701				7469
-4	-20	9583	9440				9156
0	-18	9652	9508				9222
5	-15	11522	11350				11009
17	-8	13649	13445				13041
24.8	-4	13851	13644				13234
32	0	15583	15350				14888
35	1.7	16266	16024				15541
39.2	4	17891	17624				17093
47	8	19622	19329				18748
53.6	12	20488	20182				19575
57	14	21129	20813				20187

*Total Capacity (BtuH)

READING THE TABLES

DB = dry-bulb temperature | WB = wet-bulb temperature

TC = total capacity (Btu/h) | SHC = sensible heat capacity (Btu/h)

Values and test conditions are reproduced from the supplied CH20-32 performance sheet.

CH20-32 SERIES

PERFORMANCE DATA

Capacity tables by model

24K | 230V

PERFORMANCE DATA

24K230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	14008	9908	15059	10547	16939	12054	19073	10571
14	-10	16843	11913	18106	12681	20366	14493	22932	12710
23	-5	19478	13777	20938	14665	23552	16760	26520	14699
33.8	1	20425	14447	21956	15378	24698	17575	27810	15414
53.6	12	17000	12024	18275	12800	20556	14628	23147	12829
68	20	17847	12623	19185	13437	21581	15357	24300	13468
77	25	18626	13174	20022	14024	22522	16027	25360	14056
86	30	19778	13989	21261	14891	23916	17019	26929	14925
95	35	20401	14430	21931	15360	24669	17555	27777	15395
109.4	43	21248	15029	22841	15998	25693	18283	28930	16034
118.4	48	20500	14500	22037	15435	24788	17640	27912	15470
131	55	10823	7655	11635	8149	13088	9313	14737	8168

*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)

24K

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC		
-13	-25	10155	10004	9702			
-4	-20	12449	12264	11894			
0	-18	12539	12352	11980			
5	-15	14968	14745	14301			
17	-8	17731	17467	16941			
24.8	-4	17994	17725	17191			
32	0	20243	19941	19340			
35	1.7	21131	20816	20189			
39.2	4	23242	22895	22206			
47	8	25491	25111	24355			
53.6	12	26616	26218	25429			
57	14	27448	27038	26224			

*Total Capacity (BtuH)

36K | 230V

PERFORMANCE DATA

36K230V

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)		90F DB (32C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)		73F WB (23C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
5	-15	20253	14325	21771	15249	24490	17427	27576	15284
14	-10	24351	17224	26177	18334	29445	20953	33155	18376
23	-5	28161	19918	30272	21202	34052	24231	38342	21251
33.8	1	29530	20887	31744	22234	35708	25410	40207	22285
53.6	12	24579	17385	26421	18506	29720	21149	33465	18548
68	20	25803	18251	27737	19427	31201	22203	35132	19472
77	25	26929	19047	28948	20275	32562	23171	36665	20321
86	30	28595	20225	30739	21530	34577	24605	38934	21579
95	35	29495	20862	31707	22208	35666	25380	40160	22258
109.4	43	30720	21728	33023	23129	37146	26434	41827	23182
118.4	48	29639	20964	31860	22315	35839	25503	40354	22366
131	55	15648	11068	16821	11782	18922	13465	21306	11809
*Total Capacity (BtuH) **Sensible Heat Capacity (BtuH)									

36K

Outdoor		70F DB (21C)		75F DB (24C)		80F DB (27C)	
Coil air		59F WB (15C)		63F WB (17C)		67F WB (19C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC
-13	-25	14911	14689	14246			
-4	-20	18280	18007	17465			
0	-18	18412	18137	17591			
5	-15	21979	21651	20999			
17	-8	26036	25647	24875			
24.8	-4	26421	26027	25243			
32	0	29724	29280	28398			
35	1.7	31028	30565	29645			
39.2	4	34127	33618	32605			
47	8	37430	36871	35761			
53.6	12	39081	38498	37338			
57	14	40303	39701	38506			
*Total Capacity (BtuH)							

READING THE TABLES

DB = dry-bulb temperature | WB = wet-bulb temperature

TC = total capacity (Btu/h) | SHC = sensible heat capacity (Btu/h)

Values and test conditions are reproduced from the supplied CH20-32 performance sheet.