

GAHP A - Air Source LT Low Temperature

Heating capacity (kW)

		Water delivery temperature							
		Heating					DHW		
		35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Outdoor temperature	-20 °C	30.3	28.2	26.1	24.1	21.2	12.8	11.9	8.2
	-19 °C	30.5	28.5	26.4	24.3	21.4	13.0	12.1	8.3
	-18 °C	30.8	28.7	26.6	24.6	21.7	13.2	12.3	8.4
	-17 °C	31.0	29.0	26.9	24.8	21.9	13.3	12.5	8.5
	-16 °C	31.3	29.2	27.1	25.1	22.2	13.5	12.6	8.6
	-15 °C	31.5	29.5	27.4	25.3	22.4	13.7	12.8	8.8
	-14 °C	32.0	30.0	27.9	25.8	22.9	14.0	13.2	9.0
	-13 °C	32.5	30.5	28.4	26.3	23.4	14.4	13.5	9.2
	-12 °C	33.0	31.0	28.9	26.8	23.9	14.7	13.9	9.5
	-11 °C	33.5	31.5	29.4	27.3	24.4	15.1	14.2	9.7
	-10 °C	34.0	32.0	29.9	27.8	24.9	15.5	14.6	9.9
	-9 °C	34.9	32.8	30.8	28.7	25.8	16.0	15.2	10.3
	-8 °C	35.7	33.7	31.6	29.5	26.6	16.6	15.7	10.7
	-7 °C	36.6	34.5	32.4	30.4	27.5	17.2	16.3	11.1
	-6 °C	37.1	35.2	33.0	30.8	28.1	17.6	16.6	11.3
	-5 °C	37.7	35.9	33.6	31.3	28.7	18.0	16.8	11.4
	-4 °C	38.2	36.7	34.2	31.8	29.3	18.4	17.1	11.6
	-3 °C	38.8	37.4	34.8	32.3	29.9	18.8	17.3	11.7
	-2 °C	39.3	38.1	35.4	32.8	30.5	19.1	17.6	11.9
	-1 °C	39.8	38.7	36.2	33.6	31.3	19.4	17.8	12.0
	0 °C	40.3	39.4	37.0	34.5	32.0	19.7	18.1	12.2
1 °C	40.8	40.1	37.7	35.4	32.8	19.9	18.4	12.4	
2 °C	41.3	40.8	38.5	36.3	33.6	20.2	18.7	12.6	
3 °C	41.4	40.8	38.7	36.6	34.0	20.6	19.1	12.8	
4 °C	41.5	40.9	38.9	37.0	34.3	21.0	19.5	13.1	
5 °C	41.5	41.0	39.1	37.3	34.6	21.4	19.9	13.4	
6 °C	41.6	41.0	39.3	37.7	34.9	21.8	20.3	13.6	
7 °C	41.7	41.1	39.6	38.0	35.3	22.2	20.8	13.9	
8 °C	41.7	41.2	39.8	38.4	35.8	22.7	21.0	14.1	
9 °C	41.8	41.2	40.0	38.8	36.2	23.2	21.3	14.2	
10 °C	41.8	41.3	40.3	39.2	36.7	23.6	21.6	14.4	
11 °C	41.9	41.4	40.5	39.6	37.2	24.1	21.9	14.6	
12 °C	41.9	41.5	40.7	39.9	37.6	24.5	22.2	14.7	
13 °C	42.0	41.6	41.0	40.3	38.1	25.0	22.4	14.9	
14 °C	42.0	41.7	41.2	40.7	38.6	25.5	22.7	15.0	
15 °C	42.1	41.8	41.4	41.1	39.1	25.9	23.0	15.2	

Efficiency (GUE)

		Water delivery temperature							
		Heating					DHW		
		35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Outdoor temperature	-20 °C	1.201	1.119	1.037	0.955	0.840	0.728	0.678	0.650
	-19 °C	1.211	1.129	1.047	0.965	0.850	0.738	0.688	0.659
	-18 °C	1.221	1.139	1.057	0.975	0.860	0.748	0.698	0.668
	-17 °C	1.231	1.149	1.067	0.985	0.870	0.758	0.708	0.677
	-16 °C	1.241	1.159	1.077	0.995	0.880	0.768	0.718	0.686
	-15 °C	1.251	1.169	1.087	1.005	0.890	0.778	0.728	0.695
	-14 °C	1.271	1.189	1.107	1.025	0.910	0.798	0.748	0.714
	-13 °C	1.291	1.209	1.127	1.045	0.930	0.818	0.768	0.733
	-12 °C	1.311	1.229	1.147	1.065	0.950	0.838	0.788	0.751
	-11 °C	1.331	1.249	1.167	1.085	0.970	0.858	0.808	0.770
	-10 °C	1.351	1.269	1.187	1.105	0.990	0.878	0.828	0.788
	-9 °C	1.385	1.303	1.220	1.138	1.023	0.911	0.862	0.819
	-8 °C	1.418	1.336	1.254	1.172	1.057	0.945	0.895	0.850
	-7 °C	1.452	1.369	1.287	1.205	1.090	0.978	0.928	0.881
	-6 °C	1.473	1.398	1.311	1.224	1.114	1.000	0.942	0.893
	-5 °C	1.495	1.426	1.335	1.243	1.138	1.022	0.956	0.905
	-4 °C	1.516	1.454	1.358	1.262	1.162	1.044	0.970	0.917
	-3 °C	1.538	1.483	1.382	1.281	1.186	1.066	0.983	0.930
	-2 °C	1.559	1.511	1.406	1.300	1.210	1.088	0.997	0.942
	-1 °C	1.579	1.538	1.436	1.334	1.241	1.102	1.013	0.956
	0 °C	1.599	1.564	1.467	1.369	1.272	1.117	1.029	0.969
	1 °C	1.620	1.591	1.498	1.404	1.303	1.131	1.045	0.983
	2 °C	1.641	1.619	1.529	1.440	1.335	1.146	1.060	0.997
	3 °C	1.643	1.621	1.537	1.453	1.348	1.169	1.084	1.018
	4 °C	1.645	1.623	1.545	1.467	1.360	1.193	1.108	1.039
	5 °C	1.648	1.625	1.553	1.481	1.373	1.217	1.132	1.060
	6 °C	1.650	1.627	1.561	1.495	1.386	1.240	1.155	1.081
	7 °C	1.653	1.629	1.570	1.510	1.400	1.264	1.179	1.102
8 °C	1.655	1.633	1.579	1.525	1.419	1.290	1.195	1.115	
9 °C	1.657	1.637	1.588	1.540	1.438	1.316	1.211	1.128	
10 °C	1.659	1.640	1.598	1.555	1.456	1.342	1.227	1.142	
11 °C	1.661	1.644	1.607	1.570	1.475	1.368	1.243	1.155	
12 °C	1.664	1.648	1.616	1.585	1.494	1.394	1.259	1.168	
13 °C	1.666	1.651	1.626	1.600	1.513	1.420	1.275	1.181	
14 °C	1.668	1.655	1.635	1.615	1.531	1.446	1.292	1.194	
15 °C	1.670	1.658	1.644	1.630	1.550	1.472	1.308	1.206	

Gas input (kW - LHV)

		Water delivery temperature							
		Heating					DHW		
		35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Outdoor temperature	-20 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-19 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-18 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-17 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-16 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-15 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-14 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-13 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-12 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-11 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-10 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-9 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-8 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-7 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-6 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-5 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-4 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-3 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-2 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	-1 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	0 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	1 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	2 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	3 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	4 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	5 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	6 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
	7 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6
8 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
9 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
10 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
11 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
12 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
13 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
14 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	
15 °C	25.2	25.2	25.2	25.2	25.2	17.6	17.6	12.6	

GAHP A - Air Source HT High Temperature

Heating capacity (kW)

		Water delivery temperature						
		Heating						DHW
		40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Outdoor temperature	-20 °C	31.5	29.6	27.7	25.7	23.7	22.7	9.3
	-19 °C	31.8	29.9	28.0	26.0	23.9	22.9	9.5
	-18 °C	32.0	30.1	28.2	26.2	24.2	23.2	9.6
	-17 °C	32.3	30.4	28.5	26.5	24.4	23.4	9.7
	-16 °C	32.5	30.6	28.7	26.7	24.7	23.7	9.8
	-15 °C	32.8	30.9	29.0	27.0	24.9	23.9	10.0
	-14 °C	33.0	31.1	29.2	27.2	25.2	24.2	10.1
	-13 °C	33.3	31.4	29.5	27.5	25.5	24.4	10.2
	-12 °C	33.5	31.6	29.7	27.7	25.7	24.7	10.3
	-11 °C	33.8	31.9	30.0	28.0	26.0	24.9	10.5
	-10 °C	34.0	32.1	30.2	28.2	26.2	25.2	10.6
	-9 °C	35.0	32.9	30.8	28.7	26.6	25.4	10.7
	-8 °C	36.0	33.7	31.4	29.2	27.0	25.5	10.8
	-7 °C	37.0	34.5	32.0	29.7	27.5	25.7	11.0
	-6 °C	37.4	34.9	32.4	30.2	28.0	26.1	11.0
	-5 °C	37.7	35.2	32.7	30.6	28.5	26.4	11.1
	-4 °C	38.1	35.6	33.1	31.0	29.0	26.8	11.1
	-3 °C	38.5	35.9	33.4	31.4	29.5	27.1	11.2
	-2 °C	38.8	36.3	33.8	31.9	30.0	27.5	11.2
	-1 °C	39.0	36.7	34.4	32.3	30.1	27.8	11.3
	0 °C	39.2	37.1	35.1	32.7	30.3	28.2	11.3
	1 °C	39.4	37.6	35.8	33.1	30.4	28.6	11.4
	2 °C	39.6	38.0	36.5	33.5	30.5	29.0	11.5
	3 °C	39.7	38.3	36.8	33.9	31.0	29.4	11.6
	4 °C	39.8	38.5	37.2	34.4	31.5	29.8	11.7
	5 °C	40.0	38.8	37.5	34.8	32.0	30.2	11.8
6 °C	40.1	39.0	37.9	35.2	32.5	30.7	11.9	
7 °C	40.2	39.3	38.3	35.7	33.0	31.1	12.0	
8 °C	40.4	39.4	38.5	36.0	33.5	31.6	12.1	
9 °C	40.5	39.6	38.7	36.3	34.0	32.0	12.3	
10 °C	40.6	39.8	38.9	36.6	34.4	32.5	12.4	
11 °C	40.8	39.9	39.0	37.0	34.9	33.0	12.5	
12 °C	40.9	40.1	39.2	37.3	35.4	33.4	12.7	
13 °C	41.0	40.2	39.4	37.6	35.8	33.9	12.8	
14 °C	41.2	40.4	39.6	38.0	36.3	34.3	13.0	
15 °C	41.3	40.6	39.8	38.3	36.8	34.8	13.1	

Efficiency (GUE)

		Water delivery temperature						
		Heating						DHW
		40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Outdoor temperature	-20 °C	1.250	1.175	1.100	1.020	0.940	0.900	0.740
	-19 °C	1.260	1.185	1.110	1.030	0.950	0.910	0.750
	-18 °C	1.270	1.195	1.120	1.040	0.960	0.920	0.760
	-17 °C	1.280	1.205	1.130	1.050	0.970	0.930	0.770
	-16 °C	1.290	1.215	1.140	1.060	0.980	0.940	0.780
	-15 °C	1.300	1.225	1.150	1.070	0.990	0.950	0.790
	-14 °C	1.310	1.235	1.160	1.080	1.000	0.960	0.800
	-13 °C	1.320	1.245	1.170	1.090	1.010	0.970	0.810
	-12 °C	1.330	1.255	1.180	1.100	1.020	0.980	0.820
	-11 °C	1.340	1.265	1.190	1.110	1.030	0.990	0.830
	-10 °C	1.350	1.275	1.200	1.120	1.040	1.000	0.840
	-9 °C	1.390	1.307	1.223	1.140	1.057	1.007	0.850
	-8 °C	1.430	1.338	1.247	1.160	1.073	1.013	0.860
	-7 °C	1.470	1.370	1.270	1.180	1.090	1.020	0.870
	-6 °C	1.484	1.384	1.284	1.197	1.110	1.034	0.874
	-5 °C	1.498	1.398	1.298	1.214	1.130	1.048	0.878
	-4 °C	1.512	1.412	1.312	1.231	1.150	1.062	0.882
	-3 °C	1.526	1.426	1.326	1.248	1.170	1.076	0.886
	-2 °C	1.540	1.440	1.340	1.265	1.190	1.090	0.890
	-1 °C	1.547	1.457	1.366	1.281	1.195	1.105	0.895
	0 °C	1.555	1.474	1.393	1.297	1.201	1.120	0.900
	1 °C	1.562	1.491	1.420	1.314	1.206	1.135	0.905
	2 °C	1.570	1.509	1.448	1.330	1.212	1.150	0.910
	3 °C	1.575	1.519	1.462	1.347	1.231	1.166	0.918
	4 °C	1.581	1.528	1.476	1.363	1.251	1.183	0.926
	5 °C	1.586	1.538	1.490	1.380	1.270	1.200	0.934
	6 °C	1.591	1.548	1.504	1.397	1.291	1.218	0.942
	7 °C	1.597	1.558	1.519	1.415	1.311	1.236	0.950
	8 °C	1.602	1.565	1.527	1.428	1.329	1.254	0.961
	9 °C	1.607	1.571	1.534	1.441	1.348	1.272	0.973
	10 °C	1.613	1.578	1.542	1.454	1.367	1.290	0.984
11 °C	1.618	1.584	1.549	1.467	1.385	1.308	0.995	
12 °C	1.624	1.590	1.557	1.480	1.404	1.326	1.006	
13 °C	1.629	1.597	1.565	1.494	1.423	1.344	1.018	
14 °C	1.634	1.603	1.572	1.507	1.441	1.362	1.029	
15 °C	1.640	1.610	1.580	1.520	1.460	1.380	1.040	

